

## DOCUMENT RESUME

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**IDENTIFIERS** \*Maryland State Department of Education; Project Basic

**ABSTRACT**

This document was written to provide school systems with a bibliography of suggested resources which would support Project Basic Instructional Guides. The material consists of annotated listings of student use materials, such as library books, films, filmstrips, kits, records, games, audio and videotapes, filmloops, transparencies, periodicals, and pamphlets. The items are grouped alphabetically as print or non-print resources under the following competency headings: (1) Number Concepts; (2) Whole Number Operations; (3) Mixed Number/Fraction Operations; (4) Measurement; (5) Using Data; and (6) Problem Solving. Alphabetical organization is by author for print resources and by Series Title for non-print items. It is noted that the document may be copied and reproduced by school system personnel for use as deemed appropriate. (MP)

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## PROJECT BASIC

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# INSTRUCTIONAL RESOURCES FOR MATHEMATICS

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The Office of the Superintendent: Project Basic  
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School Library Media Materials  
Support for Project Basic

INTRODUCTION

In order to provide the local school systems with a bibliography of suggested resources which would support the Project Basic Instructional Guides, the Project Basic Office and the School Library Media Services Branch, Division of Library Development and Services, agreed to jointly produce a document which suggested materials for each of the competencies in the areas of Citizenship, Survival, World of Work, Mathematics, Reading, and Writing. Since each local school system has its own policies and procedures for the evaluation and selection of materials, as well as for their procurement, the document is to be used within each system according to its own criteria.

This bibliography consists of annotated listings of student-use materials (library books, films, filmstrips, kits, records, games, audio and videotapes, filmloops, transparencies, periodicals, and pamphlets) arranged according to competencies and objectives. All items listed were researched to verify their availability at the time of publication. Use of specific materials will depend on the levels of student's skill needs, abilities, and maturity. School personnel will want to preview the materials before use.

The resources in this document were compiled under the guidance of Rosa Presberry, Staff Specialist in School Library Media Services, School Media Services Branch. The following persons contributed information for inclusion in the document:

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Paula Montgomery  
Chief  
School Library Media Services Branch  
Division of Library Development and Services  
Maryland State Department of Education

## MATHEMATICS (Number Concepts)

### The Student Will:

Write numbers in words and digits 3.1.1

Rename fractions as percents 3.1.2

Rename percents as decimals 3.1.3

Other decimals 3.3.1

### GOAL:

To understand concepts and processes

### COMPETENCY:

Understanding numbers and numeration

Understanding geometric properties and measurement

Understanding properties and processes of the number system

### PRINT RESOURCES:

- |                 |                                                                                                                                          |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Author:         | Adler, David A.                                                                                                                          |
| Title:          | <u>Roman Numerals</u>                                                                                                                    |
| Copyright Date: | 1977                                                                                                                                     |
| Publisher:      | Crowell                                                                                                                                  |
| Interest Level: | 3-5                                                                                                                                      |
| Annotation:     | This book explains how to write Roman numerals and gives a brief history of the symbols.                                                 |
|                 |                                                                                                                                          |
| Author:         | Adler, Irving                                                                                                                            |
| Title:          | <u>Magic House of Numbers</u>                                                                                                            |
| Copyright Date: | 1974                                                                                                                                     |
| Publisher:      | Day                                                                                                                                      |
| Interest Level: | 6-8                                                                                                                                      |
| Annotation:     | The hows and whys of the number system are described through mathematical curiosities, riddles, tricks, and games.                       |
|                 |                                                                                                                                          |
| Author:         | Adler, Irving                                                                                                                            |
| Title:          | <u>The New Mathematics</u>                                                                                                               |
| Copyright Date: | 1972                                                                                                                                     |
| Publisher:      | Day                                                                                                                                      |
| Interest Level: | 7-9                                                                                                                                      |
| Annotation:     | This book provides a survey of the structure of the number systems.                                                                      |
|                 |                                                                                                                                          |
| Author:         | Anno, Mitsumasa                                                                                                                          |
| Title:          | <u>Anno's Counting Book</u>                                                                                                              |
| Copyright Date: | 1977                                                                                                                                     |
| Publisher:      | Crowell                                                                                                                                  |
| Interest Level: | PreK-2                                                                                                                                   |
| Annotation:     | The reader discovers cumulative number combinations on each page of this book--houses, birds, trees, and people as the seasons progress. |

Print Resources (continued):

- Author: Anno, Mitsumasa  
Title: Topsy-Turvies: Pictures to Stretch the Imagination  
Copyright Date: 1970  
Publisher: Weatherhill  
Interest Level: 1-9  
Annotation: Each picture challenges the reader to decide what has happened or is happening.
- Author: Anno, Mitsumasa  
Title: Upside-Downers: More Pictures to Stretch the Imagination  
Copyright Date: 1971  
Publisher: Weatherhill  
Interest Level: 1-4  
Annotation: The pictures are described in rhymes in this book.
- Author: Asch, Frank  
Title: Little Devil's 1 2 3  
Copyright Date: 1979  
Publisher: Charles Scribner's Sons  
Interest Level: K-2  
Annotation: This book is designed to help students with counting in groups of fives.
- Author: Asimov, Isaac  
Title: How Did We Find Out About Numbers  
Copyright Date: 1973  
Publisher: Walker  
Interest Level: 4-6  
Annotation: This book provides a history of various numerical systems such as the Roman and Arabic.
- Author: Barr, Stephen  
Title: Puzzlequiz: Wit Twisters, Brain Teasers, Riddles, Puzzles, and Tough Questions  
Copyright Date: 1978  
Publisher: Crowell  
Interest Level: 7-4  
Annotation: This book contains a collection of riddles, puzzles, and brain teasers for enrichment in math.
- Author: Bayley, Nicola  
Title: One Old Oxford Ox  
Copyright Date: 1977  
Publisher: Atheneum  
Interest Level: K-4  
Annotation: This book presents twelve nonsensical counting rhymes.

Print Resources (continued):

- Author: Benson, William H. and Jacoby, Oswald  
Title: New Recreations with Magic Squares  
Copyright Date: 1976  
Publisher: Dover  
Interest Level: 9-12  
Annotation: This book contains an original work, some new methods, and about 880 known fourth-order magic squares.
- Author: Berenstain, Stanley and Janice  
Title: The Berenstain Bears' Counting Book  
Copyright Date: 1976  
Publisher: Random  
Interest Level: K-3  
Annotation: Numbers one through ten are illustrated as each bear skates to join a friend.
- Author: Bergerson, Howard W.  
Title: Palindromes and Anagrams  
Copyright Date: 1973  
Publisher: Dover  
Interest Level: 9-12  
Annotation: This book provides a collection of anagrams and palindromes for student's enrichment.
- Author: Berloquin, Pierre  
Title: 100 Games of Logic  
Copyright Date: 1977  
Publisher: Scribner  
Interest Level: 7-9  
Annotation: Readers will find one hundred logical puzzles with solutions provided.
- Author: Berloquin, Pierre  
Title: 100 Numerical Games  
Copyright Date: 1976  
Publisher: Scribner  
Interest Level: 7-9  
Annotation: This book contains one hundred numerical games with answers.
- Author: Boynton, Sandra  
Title: Hippo Go Berserk  
Copyright: 1979  
Publisher: Little  
Interest Level: PreK-2  
Annotation: This is a counting book in rhyme about several hippos.



Print Resources (continued):

- Author: Bridgman, Elizabeth  
Title: All the Little Bunnies: A Counting Book  
Copyright: 1977  
Publisher: Atheneum  
Interest Level: K-1  
Annotation: An entertaining counting book which uses the numbers one to ten.
- Author: Brooke, Maxey  
Title: Coin Games and Puzzles  
Copyright Date: 1973  
Publisher: Dover  
Interest Level: 9-12  
Annotation: This book contains sixty games and puzzles with many illustrations.
- Author: Brooke, Maxey  
Title: Tricks, Games and Puzzles with Matches  
Copyright Date: 1973  
Publisher: Dover  
Interest Level: 9-12  
Annotation: This book contains 101 puzzles, tricks, and games.
- Author: Brown, Marc  
Title: One Two Three: An Animal Counting Book  
Copyright Date: 1976  
Publisher: Little, Brown  
Interest Level: 1-3  
Annotation: The numerals one through twenty are introduced by presenting appropriate groupings of animals. Each number is reinforced by its symbol and word name.
- Author: Brown, Marcia  
Title: Listen to a Shape  
Copyright Date: 1979  
Publisher: Watts  
Interest Level: 2-4  
Annotation: Various shapes are explored in simple text and photographs.
- Author: Carle, Eric  
Title: My Very First Book of Numbers  
Copyright Date: 1974  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: This book, without text, emphasizes the one-to-one correspondence between sets of objects. It includes numerals from one to ten.

Print Resources (continued):

- Author: Carle, Eric  
Title: The Rooster Who Sets Out to See the World  
Copyright Date: 1972  
Publisher: Watts  
Annotation: A story of a rooster who sets out to see the world and is joined by an appropriate number of animals.
- Author: Charles, Donald  
Title: Calico Cat Looks Around  
Copyright Date: 1975  
Publisher: Children's Press  
Interest Level: K-1  
Annotation: A variety of geometric figures is introduced in this book.
- Author: Charlip, Remy  
Title: Thirteen  
Copyright Date: 1975  
Publisher: Parents  
Interest Level: 1-3  
Annotation: This is a wordless concept book consisting of thirteen picture sequences in which shapes evolve into new forms.
- Author: Charosh, Mannis  
Title: Number Ideas Through Pictures  
Copyright Date: 1974  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: This book examines even and odd numbers, square and triangular numbers, and how they can be combined and used.
- Author: Children's Television Workshop  
Title: Sesame Street Book of Numbers  
Copyright Date: 1973  
Publisher: Random  
Interest Level: K-2  
Annotation: Numerals one through ten are introduced.
- Author: Children's Television Workshop  
Title: The Sesame Street 1, 2, 3 Storybook  
Copyright Date: 1973  
Publisher: Random  
Interest Level: PreK-2  
Annotation: Numbers and values one through ten are demonstrated in this book.
- Author: Clark, Alice and Leitch, Carol  
Title: Mathamerica  
Copyright Date: 1977  
Publisher: Midwest Publications  
Interest Level: 1-6  
Annotation: This is a series of three books designed as practice in the basic skills.

Print Resources (continued):

Author: Cleveland, David  
Title: The April Rabbits  
Copyright Date: 1978  
Publisher: Coward  
Interest Level: PreK-2  
Annotation: The days of the month and a group of rabbits are used in this book to teach counting.

Author: Cretan, Gladys T.  
Title: Ten Brothers with Camels  
Copyright Date: 1975  
Publisher: Western  
Interest Level: 1-3  
Annotation: Cardinal and ordinal numbers, one through ten, are emphasized as ten brothers with camels come together for a party.

Author: Cunningham, Aline  
Title: My Counting Book  
Copyright Date: 1973  
Publisher: Concordia  
Interest Level: PreK-1  
Annotation: This book introduces numbers one through ten by describing the body parts.

Author: Diot, Alain  
Title: Better, Best, Bestest  
Copyright Date: 1977  
Publisher: Harlan Quist  
Interest Level: 1-2  
Annotation: The story of a child that wanted to know from his father what he has that is bigger and better than anything in the world. The meaning of the concept "bigger" comes into focus.

Author: Ehrlich, Amy  
Title: The Everyday Train  
Copyright Date: 1977  
Publisher: Dial Press  
Interest Level: PreK-1  
Annotation: A story of Jane who watches the train go by her house, noting the many kinds of freight cars it pulls.

Author: Emmet, E. R.  
Title: Puzzles for Pleasures  
Copyright Date: 1972  
Publisher: Emmerson  
Interest Level: 6-9  
Annotation: This book presents one hundred puzzles of varying types that are arranged in order of difficulty with answers.

Print Resources (continued):

- Author: Feelings, Muriel  
Title: Moja Means One: The Swahili Counting Book  
Copyright Date: 1971  
Publisher: Dial  
Interest Level: 1-4  
Annotation: This unique book provides counting from one through ten in Swahili as well as describing the uniqueness of the East African People.
- Author: Fixx, James F.  
Title: Solve It! A Perplexing Profusion of Puzzles  
Copyright Date: 1978  
Publisher: Doubleday  
Interest Level: 5-12  
Annotation: These puzzles provide a four-step problem-solving process and a list of ten rules to help students organize their thoughts logically.
- Author: Freschet, Berniece  
Title: The Ants Go Marching  
Copyright Date: 1973  
Publisher: Scribner's  
Interest Level: K-3  
Annotation: Each numeral one through ten is introduced through illustrated marching ants.
- Author: Freschet, Berniece  
Title: Where's Henrietta's Hen?  
Copyright Date: 1980  
Publisher: Putman  
Interest Level: PreK  
Annotation: This is a story of a hen that disappears but is finally found in a haystack.
- Author: Freudberg, Judy  
Title: Some, More, Most  
Copyright Date: 1976  
Publisher: Larousse  
Interest Level: K-2  
Annotation: The concepts of some, more, most; close, closer, closest; big, bigger, biggest; tall, taller, tallest; and long, longer, longest are explained in this book.
- Author: Froman, Robert  
Title: Bigger and Smaller  
Copyright Date: 1971  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: The concepts of large and small are explained by comparing one object with another.



Print Resources (continued):

- Author: Froman, Robert  
Title: A Game of Functions  
Copyright Date: 1974  
Publisher: Crowell  
Interest Level: K-3  
Annotation: The concept of function is explained in this book.
- Author: Froman, Robert  
Title: The Greatest Guessing Game: A Book About Dividing  
Copyright Date: 1978  
Publisher: Crowell  
Interest Level: 3-5  
Annotation: This book provides the division process as a fun activity, emphasizing its thinking aspect.
- Author: Froman, Robert  
Title: Rubber Bands, Baseballs and Doughnuts: A Book About Topology  
Copyright Date: 1972  
Publisher: Crowell  
Interest Level: 1-4  
Annotation: Concepts of topology; genus 0, genus 1, and genus 2 shapes are demonstrated through very humorous illustrations.
- Author: Gardner, Martin  
Title: Mathematical Carnival  
Copyright Date: 1975  
Publisher: Knopf  
Interest Level: 7-8  
Annotation: This is a collection of mathematical puzzles and games suitable for middle school students.
- Author: Gill, Bob  
Title: I Keep Changing  
Copyright Date: 1971  
Publisher: Scroll Press  
Interest Level: PreK-3  
Annotation: The concept of comparison is emphasized in this book.
- Author: Goeller, Lee  
Title: How to Make an Adding Machine That Even Adds Roman Numerals  
Copyright Date: 1979  
Publisher: Harcourt  
Interest Level: 4-  
Annotation: This book provides instructions for making an abacus from egg cartons and marbles for counting purposes.

Print Resources (continued):

- Author: Grayson, Marion  
Title: Let's Count and Count Out  
Copyright Date: 1975  
Publisher: Robert B. Luce  
Interest Level: PreK-2  
Annotation: This book reinforces number concepts through rhymes.
- Author: Grender, Iris  
Title: Playing with Numbers  
Copyright Date: 1975  
Publisher: Pantheon  
Interest Level: K-3  
Annotation: Twelve activities are used to introduce the numbers one through five and their symbols.
- Author: Grender, Iris  
Title: Playing with Shapes and Sizes  
Copyright Date: 1975  
Publisher: Pantheon  
Interest Level: PreK-1  
Annotation: A book of games designed to help students develop the ability to sort and match sizes and shapes.
- Author: Hartman, Arlene  
Title: The Calculator Game Book for Kids of all Ages  
Copyright Date: 1977  
Publisher: New American  
Interest Level: 4-9  
Annotation: This book provides puzzles and arithmetic problems for students in need of additional work.
- Author: Hoban, Russell  
Title: Ten What? A Mystery Counting Book  
Copyright Date: 1975  
Publisher: Scribner's  
Interest Level: K-1  
Annotation: This book explains the numbers one through ten with a single number concept on each page.
- Author: Hoban, Tana  
Title: Count and See  
Copyright Date: 1974  
Publisher: Macmillan  
Interest Level: K-1  
Annotation: This book discusses number concepts one through fifteen and multiples of ten are introduced.
- Author: Hoban, Tana  
Title: More Than One  
Copyright Date: 1981  
Publisher: Greenwillow  
Interest Level: K-2  
Annotation: A unique book that explains words that mean more than one; such as group, flock, row, etc.

Print Resources (continued):

- Author: Hoban, Tana  
Title: Over, Under and Through and Other Spatial Concepts  
Copyright Date: 1973  
Publisher: Macmillan  
Interest Level: K-2  
Annotation: The concepts of over, under, through, on, in, around, across, between, beside, below, against, and behind are explained in this book.
- Author: Hoban, Tana  
Title: Push-Pull, Empty-Full: A Book of Opposites  
Copyright Date: 1972  
Publisher: Macmillan  
Interest Level: 1-3  
Annotation: Tana Hoban illustrates fifteen pairs of opposites in this book.
- Author: Hoberman, Mary Ann  
Title: The Looking Book  
Copyright Date: 1973  
Publisher: Knopf  
Interest Level: 1-3  
Annotation: Ned looks for his lost cat Pistachio as each number one through twenty-eight is introduced.
- Author: Hobæk, Mildred  
Title: We Came a Marching...1, 2, 3  
Copyright Date: 1978  
Publisher: Parents  
Interest Level: K-2  
Annotation: This is a counting book in twelve different languages.
- Author: Hunter, J.A.H.  
Title: Mathematical Brain-Teasers  
Copyright Date: 1976  
Publisher: Dover  
Interest Level: 7-9  
Annotation: This book presents 150 mathematical puzzles in the form of anecdotes. Answers are secured through the use of arithmetic, algebra, geometry, and logic.
- Author: Hunter, J.A.H.  
Title: Mathematical Diversions  
Copyright Date: 1975  
Publisher: Dover  
Interest Level: 6-8  
Annotation: This book provides a hundred problems under such headings as paradoxes, mystic arrays, topological delights, and teasers. Answers are included.

Print Resources (continued):

- Author: Kalan, Robert  
Title: Blue Sea  
Copyright Date: 1979  
Publisher: Greenwillow  
Interest Level: K-3  
Annotation: This is a story of the big fish and little fish in the sea that convey the idea of size.
- Author: Kredenser, Gail  
Title: One Dancing Drum  
Copyright Date: 1971  
Publisher: Phillips  
Interest Level: K-3  
Annotation: This book presents symbols and words for numbers one through ten in cartoon drawings and simple text.
- Author: Kruss, James  
Title: Three by Three  
Copyright Date: 1972  
Publisher: Macmillan  
Interest Level: PreK-1  
Annotation: The number three is introduced and reinforced by pictures of many different kinds of animals.
- Author: Lamb, Geoffrey  
Title: Pencil and Paper Tricks  
Copyright Date: 1977  
Publisher: Nelson  
Interest Level: 7-12  
Annotation: This book presents twenty-nine number puzzles and tricks for mathematical enrichment.
- Author: Lasker, Joe  
Title: Lentil Soup  
Copyright Date: 1977  
Publisher: Whitman  
Interest Level: K-3  
Annotation: The story of the farmer's wife who cooks seven different lentil soups in order of the days of the week.
- Author: Leighton, Ralph and Feynman, Carl  
Title: How to Count Sheep without Falling Asleep  
Copyright Date: 1976  
Publisher: Prentice-Hall  
Interest Level: K-3  
Annotation: This book explains how the number system was developed.



Print Resources (continued):

Author: Leydenfrost, Robert  
Title: The Little Elephants  
Copyright Date: 1975  
Publisher: Doubleday  
Interest Level: 1-3  
Annotation: This book involves counting backwards from ten to one.

Author: Little, Mary E.  
Title: 1, 2, 3, for the Library  
Copyright Date: 1974  
Publisher: Atheneum  
Interest Level: 1-3  
Annotation: Number concepts are introduced as children arrive at the library.

Author: Livermore, Elaine  
Title: Lost and Found  
Copyright Date: 1975  
Publisher: Houghton  
Interest Level: K-3  
Annotation: This is a puzzle book in which the reader must find items missing in illustrations.

Author: Livermore, Elaine  
Title: One to Ten, Count Again  
Copyright Date: 1973  
Publisher: Houghton  
Interest Level: PreK-3  
Annotation: This book provides techniques for counting from one to ten.

Author: Madison, Arnold and Drotar, David L.  
Title: Pocket Calculators: How to Use and Enjoy Them  
Copyright Date: 1978  
Publisher: Nelson  
Interest Level: 7-12  
Annotation: The author provides information on the development, inner workings, and operations of the pocket calculator as well as suggested activities and exercises.

Author: Maestro, Guilio  
Title: One More and One Less  
Copyright Date: 1974  
Publisher: Crown  
Interest Level: PreK-2  
Annotation: This book explains how an animal is added on each page up to ten, and then an animal is subtracted as they leave one by one.

Print Resources (continued):

- Author: Morgenstern, Steve  
Title: Metric Puzzles, Tricks and Games  
Copyright Date: 1978  
Publisher: Sterling  
Interest Level: 5-9  
Annotation: This book presents a collection of games, riddles, and activities related to the metric system.
- Author: Nolan, Dennis  
Title: Monster Bubbles  
Copyright Date: 1976  
Publisher: Prentice-Hall  
Interest Level: 1-3  
Annotation: This book demonstrates counting from one through twenty.
- Author: O'Brian, Thomas  
Title: Odds and Evens  
Copyright Date: 1971  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: Puzzles and other activities are used to explain odd and even numbers.
- Author: Pallas, Norvin  
Title: Calculator Puzzles, Tricks and Games  
Copyright Date: 1976  
Publisher: Sterling  
Interest Level: 5-12  
Annotation: This book provides games, puzzles, and problems dealing with taxes using the calculator.
- Author: Petie, Harris  
Title: Billions of Bugs  
Copyright Date: 1975  
Publisher: Prentice-Hall  
Interest Level: 1-3  
Annotation: Through drawings of insects, numbers 1, 10, 20, 30, 40...90, 100, and 200...1,000 are introduced.
- Author: Pienkowski, Jan  
Title: Numbers  
Copyright Date: 1975  
Publisher: Harvey House  
Interest Level: 1-3  
Annotation: This book explains the concepts of numbers one through ten.
- Author: Pienkowski, Jan  
Title: Sizes  
Copyright Date: 1975  
Publisher: Harvey House  
Interest Level: PreK-2  
Annotation: The concept of size is discussed in this book.

Print Resources (continued):

- Author: Reiss, John J.  
Title: Numbers  
Copyright Date: 1971  
Publisher: Bradbury  
Interest Level: 4-6  
Annotation: This book explains multiples of 10 to 100 and number values 1 through 20.
- Author: St. John, Glory  
Title: How to Count Like a Martian  
Copyright Date: 1975  
Publisher: Walck  
Interest Level: 4-7  
Annotation: This book explains number concepts such as base, place, zero, and symbols.
- Author: Sazer, Nina  
Title: What Do You Think I Saw?  
Copyright Date: 1976  
Publisher: Pantheon  
Interest Level: PreK-2  
Annotation: A very clever story of a rhinoceros who introduces numbers one through ten on his way to town.
- Author: Scarry, Richard  
Title: Learn to Count  
Copyright Date: 1976  
Publisher: Golden  
Interest Level: PreK-1  
Annotation: Scarry's unique method of introducing "a little and a lot" using numbers one through twelve.
- Author: Scarry, Richard  
Title: Richard Scarry's Best Counting Book Ever  
Copyright Date: 1975  
Publisher: Random  
Interest Level: K-2  
Annotation: This book demonstrates numbers 1 through 20 and multiples of 10 through 100.
- Author: Sendak, Maurice  
Title: Seven Little Monsters  
Copyright Date: 1977  
Publisher: Harper  
Interest Level: K-2  
Annotation: This is a very interesting counting book involving monsters that townspeople try to eliminate.
- Author: Sentlowitz, Michael and Trivisone, Margaret  
Title: Dice and Dots  
Copyright Date: 1979  
Publisher: Addison-Wesley  
Interest Level: 4-6  
Annotation: This book provides ten mathematic games for reinforcing the basic skills and concepts of math.



Print Resources (continued):

- Author: Snapp, Martha and Charles  
Title: Let's Find Out about What's Big and What's Small  
Copyright Date: 1975  
Publisher: Watts  
Interest Level: K-3  
Annotation: This book explains the relationship of big to small.
- Author: Shapp, Martha and Charles  
Title: Let's Find Out about What's Light and What's Heavy  
Copyright Date: 1975  
Publisher: Watts  
Interest Level: K-3  
Annotation: Experiments are used to compare objects in terms of their lightness or heaviness.
- Author: Sitomer, Mindel  
Title: How Did Numbers Begin?  
Copyright Date: 1976  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: This book provides the history and use of numbers.
- Author: Sitomer, Mindel  
Title: Zero Is Not Nothing  
Copyright Date: 1978  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: This book explores the zero as a place holder. It discusses the zero as a starting point, as a separation point, as a breakeven point, and as a place holder in a place value system.
- Author: Smith, David E.  
Title: Number Stories of Long Ago  
Copyright Date: 1973  
Publisher: Gale  
Interest Level: 1-3  
Annotation: The history of numbers is discussed in this book.
- Author: Smullyan, Raymond M.  
Title: What is the Name of This Book? The Riddle of Dracula and Other Logical Puzzles  
Copyright Date: 1978  
Publisher: Prentice  
Interest Level: 9-12  
Annotation: This book provides a collection of puzzles and riddles to enrich high school students' math skills.



Print Resources (continued):

- Author: Srivastana, Jane Jonas  
Title: Number Families  
Copyright Date: 1979  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: This book explains how numbers work in groups. Concepts such as even, odd, times, prime, square, and triangle are explained.
- Author: Summers, George J.  
Title: Mind Teasers: Logic Puzzles and Games of Deduction  
Copyright Date: 1977  
Publisher: Sterling  
Interest Level: 10-12  
Annotation: This book offers a collection of problems and puzzles in logic to challenge math students; includes clues, explanations, and solutions, especially in geometry.
- Author: Tudo, Tasha  
Title: One Is One  
Copyright Date: 1971  
Publisher: Rand McNally  
Interest Level: K-1  
Annotation: Numbers and their values are presented through Tasha Tudor's delightful verse.
- Author: Vogle, Ise-Margaret  
Title: One Is No Fun But Twenty Is Plenty  
Copyright Date: 1972  
Publisher: Atheneum  
Interest Level: PreK-2  
Annotation: Numerals are explained through verse, rhyme, and couplets.
- Author: Wahl, John and Stacey  
Title: I Can Count the Petals of a Flower  
Copyright Date: 1975  
Publisher: National Council of Teachers of Mathematics  
Interest Level: 1-3  
Annotation: Through the use of flowers numbers one through sixteen are illustrated.
- Author: Watson, Clyde  
Title: Binary Numbers  
Copyright Date: 1977  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: This book explains the binary number system and how it can be used.

Print Resources (continued):

- Author: Weiss, Malcolm E.  
Title: 666 Jellybeans! All That? An Introduction to Algebra  
Copyright Date: 1976  
Publisher: Crowell  
Interest Level: K-3  
Annotation: Techniques for introducing the fundamentals of algebra are explained in this book.
- Author: Wells, Rosemary  
Title: Max's Toys  
Copyright Date: 1979  
Publisher: Dial  
Interest Level: K-2  
Annotation: This book uses toys to introduce numbers one through ten.
- Author: Whitney, David C.  
Title: The Easy Book of Numbers and Numerals  
Copyright Date: 1973  
Publisher: Watts  
Interest Level: 4-6  
Annotation: The use of cardinal and ordinal numbers is explained.
- Author: Wild, Robin  
Title: The Bears' Counting Book  
Copyright Date: 1978  
Publisher: Lippincott  
Interest Level: K-2  
Annotation: A Goldilocks story is used to introduce numbers.
- Author: Wolcott, Patty  
Title: Tunafish Sandwiches  
Copyright Date: 1975  
Publisher: Addison Press  
Interest Level: 1-3  
Annotation: Starting with little animals, the food chain is traced to tunafish sandwiches.
- Author: Wyler, Rosa and Ames, Gerald  
Title: It's All Done with Numbers  
Copyright Date: 1979  
Publisher: Doubleday  
Interest Level: 4-6  
Annotation: This book includes fortunetelling games such as giving numerical values to the letters in one's name and determining the future based on the sum of the digits.

NONPRINT RESOURCES:

- Series Title: Basic Math Program Levels One Through Six  
Individual Titles: Level I--The Numbers 0-4; The Numbers 5-9; Addition; Basic Properties of Addition; Subtraction; Place Value; More About Addition; More About Subtraction; Money; Time; Geometry; Measurement
- Description of Item & Its Components: 12 filmstrips, teacher's manual  
Producer: Educational Projections Corporation  
Copyright Date: 1980  
Interest Level: 1  
Annotation: This series of filmstrips covers the basic principles so important to a functional understanding of mathematics.
- Series Title: Calculation Cubes  
Description of Item & Its Components: 12 large (22 mm) white plastic cubes  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: These cubes are useful in a variety of lessons including math activities from basic counting to addition and subtraction of positive and negative integers.
- Series Title: The Counting Box  
Description of Item & Its Components: Box, 50 picture plaques  
Producer: Childcraft  
Copyright Date: 1980  
Interest Level: K-1  
Annotation: This counting box is divided into slots in which the box lid holds plaques with numerals on one side and dots on the other. There are fifty picture plaques that fit in slots to match the numerals.
- Series Title: Counting Shapes (Magnetic)  
Description of Item & Its Components: 50, three-dimensional molded plastic shapes  
Producer: J. L. Hammett Company  
Copyright Date: 1979  
Interest Level: K-2  
Annotation: These plastic shapes are useful for developing skills in counting.
- Title: Diagnosis, An Instructional Aid for Mathematics, Level A  
Description of Item & Its Components: Individual tests and correlations  
Producer: Science Research Associate  
Copyright Date: 1980  
Interest Level: K-3  
Annotation: This program is designed to support the basal course of study in the primary grades in the areas of numbers and numerals--addition, subtraction, and story problems, geometry, and measurement.



Nonprint Resources (continued):

- Series Title: Disney's Basic Math Program  
Individual Titles: Fractions with Mickey, Morty and Ferdie; Basic Shapes with Donald and Jimmy; Numeration with Minnie and Goofy; Addition with Daisy and Scrooge; Subtraction with Daisy and Scrooge; Money with Huey, Dewey and Louie
- Description of Item & Its Components: 6 filmstrips, 6 cassettes, 6 spirit masters, teacher's guide  
Producer: Walt Disney Educational Media Company  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This excellent series presents basic mathematical concepts. All of the concepts are woven into entertaining stories which center around a problem requiring the characters to learn a specific mathematical procedure.
- Title: Distan Arithmetic 1 and 2  
Description of Item & Its Components: Presentation book, take-home workbook, figure cards, and form boards  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: K-3  
Annotation: This program provides precise strategies for solving problems, column addition with carrying, multiplication, and complex story problems.
- Series Title: Exploring Mathematics  
Individual Titles: The Case of the Missing Checkcows; Adding Positive and Negative Integers; The Weird Number; Introducing Fractions; The Dinosaurs' Dilemma; The Meaning of Variable; Place to Place; Place Values; Lost in the Mish-Mosh; Area Measure; Zero: Something for Nothing; Prime Time: Prime and Composite Numbers; Noah's Ark: Multiplying with Fractions; Probableman: Frequency in Terms of Probability
- Description of Item & Its Components: 9 filmstrips, 9 cassettes, teacher's guide  
Producer: Guidance Associates  
Copyright Date: 1974  
Interest Level: 4-8  
Annotation: This series of filmstrips uses mystery stories and funny tales to simplify math concepts.



Nonprint Resources (continued):

Series Title: First Things: Mathematics  
Individual Titles: Making Sense of Sets; More About Sets; Measurement: How to Say How Much; Measuring the Metric Way; Beginning Geometry: Shapes and Ideas; Comparison: Putting a Symbol to Work; Number Patterns: Puzzles with a Purpose

Description of Item & Its Components: 15 filmstrips, 7 cassettes, 7 teacher's guides  
Producer: Guidance Associates  
Copyright Date: 1974  
Interest Level: K-3  
Annotation: These filmstrips present mathematical concepts and symbols to the very young. Each program uses colorful drawings and photographs, along with stories, songs, humor, magic, and fantasy to involve students.

Series Title: Fun with Sets  
Description of Item & Its Components: 1 filmstrip, cassette/record  
Producer: International Film Bureau  
Copyright Date: 1979  
Interest Level: 1-3  
Annotation: This filmstrip uses doll clothing, toy soldiers, crayons, pennies, animals, and fruits to compare sets and to explain members, numeral symbols, subsets, and place-holder boxes.

Series Title: Ice Cream Cones: Beginning Math Game  
Description of Item & Its Components: 18" X 24" gameboard, 48 color-coded cards, 3 spinners, instruction sheet  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This game is designed to master basic addition and subtraction facts. It can be used to play three different types of games; adding sums through twelve, subtracting, and matching numerals.

Series Title: Large Abacus  
Description of Item & Its Components: Abacus, instructions  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-6  
Annotation: This object is very good for teaching students how to count.

Nonprint Resources (continued):

Series Title: Manipulatives for Basic Concepts  
 Individual Title: Manipulatives for Decimals  
 Description of Item  
 & Its Components: Decimal squares, decimal squares step-by-step teacher's guide, decimal squares step-by-step reproducible workbook, set of decimal squares, decimal squares playing cards, decimal squares starter set, decimal squares step-by-step classroom  
 Program Producer: Creative Publications  
 Copyright Date: 1980  
 Interest Level: 4-6  
 Annotation: This series of manipulatives presents a wide variety of games and activities in the seven skill areas: readiness, basic concepts, equality, addition, subtraction, multiplication, and division of decimals.

Series Title: Manipulatives for Basic Concepts  
 Individual Title: Manipulatives for Operations and Place Value--Chip Trading Program  
 Description of Item  
 & Its Components: Chip Trading Starting, Chip Training Primary Set, Chip Trading Intermediate Set, Chip Trading Math Lab Set, Chip Trading Activities Book I--Introduction, Book II--Addition and Subtraction, Book III--Multiplication, Book IV--Division, Book V--Place Value and Numeration, Book VI--Bases Other than Ten, Teacher's Guide (Chip Trading Abacus Board, Chip Trading Till, Package of Ten, 5 Pin Chip Board, Chip Trading Numeral Cards, Cards, Chips)  
 Producer: Creative Publications  
 Copyright Date: 1980  
 Interest Level: K-6  
 Annotation: This program develops basic math skills by means of games, activities, and problems and can be used in individualized instruction.

Series Title: Manipulatives for Basic Concepts  
 Individual Title: Manipulatives for Operations and Place Value--Cuisenaire Rods  
 Description of Item  
 & Its components: Cuisenaire Rod Sets, Idea Book for Cuisenaire Rods at the Primary Level, Using the Cuisenaire Rods--A Photo/Text Guide for Teachers, Picture Puzzles with Cuisenaire Rods, Multiplication and Division through Rod Patterns and Graph Paper, Cuisenaire Rods for the overhead Projector, Cuisenaire Rod Template, Cuisenaire Rod Rack, Activity cards for Cuisenaire.  
 Producer: Creative Publications  
 Copyright Date: 1980  
 Interest Level: 1-8  
 Annotation: Cuisenaire rods are very useful in developing math concepts.

Nonprint Resources (continued):

Series Title: Manipulatives for Basic Concepts  
 Individual Title: Manipulatives for Operations and Place Value--  
 Number Blox  
 Description of Item  
 & Its Components: Number-Blox Small Group Set, Number Blox Classroom  
 Set, Number-Blox Math Law Set, Number-Blox  
 Activities  
 Producer: Creative Publications  
 Copyright Date: 1980  
 Interest Level: K-6  
 Annotation: This program consists of manipulative materials  
 and a sequence of tasks to help the student in  
 problem solving.

Series Title: Manipulatives for Basic Concepts  
 Individual Title: Manipulatives for Sorting and Counting--  
 Attribute Blocks  
 Description of Item  
 & Its components: Attribute Blocks, Attribute Hoops, Attribute  
 Games and Problems Set, Loop Activity Cards  
 Producer: Creative Publications  
 Copyright Date: 1981  
 Interest Level: 1-6  
 Annotation: This kit of blocks, hoops, and games is an  
 effective, concrete learning aid that involves  
 the student in classifying, discovering  
 equivalence relationships, and ordering, all of  
 which involve logical thinking.

Series Title: Manipulatives for Basic Concepts  
 Individual Title: Manipulatives for Sorting and Counting--  
 Experience in Number Readiness Kit  
 Description of Item  
 & Its components: Counting Sticks, Beginning Number Poster Cards,  
 Cubical Blocks, Flannel Cutouts and Numbers, Math  
 Lotto Games, Plastic Counters, Pegboards and  
 Pegs, and Teddy Bear Counters  
 Producer: Creative Publications  
 Copyright Date: 1980  
 Interest Level: PreK  
 Annotation: This supplemental program is designed to  
 reinforce and enrich the math curriculum and aid  
 in the development of number readiness skills.

Series Title: Manipulatives for Basic Concepts  
 Individual Titles: Manipulatives for Sorting and Counting: The Land  
 of the Nums; An Introduction to Basic Math  
 Description of Item  
 & Its Components: 6 filmstrips/cassettes, teacher's manual, spirit  
 masters  
 Producer: Creative Publications  
 Copyright Date: 1981  
 Interest Level: K-2  
 Annotation: Designed to introduce and develop some of the  
 basic concepts of math, including the operations  
 of addition and subtraction.



Nonprint Resources (continued):

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Sorting and Counting--Multilink  
Description of Item & Its Components: 1,000 multilinks, multilink handbook, multilink activity cards, counting sticks, counting chips, wooden cubes, lots-a-links, quiet counters, counting frame, color cube activities  
Producer: Creative Publications  
Copyright Date: 1980  
Interest Level: 4-6  
Annotation: These manipulatives are useful for introducing basic skills and concepts such as graphing, and for exploring number and place value relationships.

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Operations and Place Value--Unifix Materials  
Description of Item & Its Components: Unifix Introductory Kit, Unifix Elementary Kit, Unifix Lab Kit  
Producer: Creative Publications  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: These kits include the basic manipulatives for a complete beginning arithmetic program. They provide materials for individualized instruction as well as for groups.

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Operations and Place Value--Unimath  
Description of Item & Its Components: Unifix Cubes, Unifix 100 Tract, Unifix 1-10 Inset Pattern Boards, Unifix 1-100 Operational Grid and Container, Unifix Number Indicators, Unifix 1-10 Stair, Unifix 1-10 Value Boats, Unifix 1-10 and Units Tray, Unifix 10 x 10 Number Tray, Unifix 1-100 Operational Board (number concept, whole number operations, mixed number/fraction operations, Measurement, problem solving), Teacher's Manual  
Producer: Creative Publications  
Copyright Date: 1980  
Interest Level: K-3  
Annotation: This kit of activities provides concrete models for teaching pre-number and number concepts, numeration, operations with whole numbers, estimation, measurement, graphing, fractions, and problem solving.



Nonprint Resources (continued):

Series Title: Mathematics Readiness  
Individual Titles: Identifying and Classifying; Comparing: Size and Number; Ordering and Positioning; Counting and Recognizing Numbers  
Description of Item & Its Components: 4 filmstrips  
Producer: Encyclopaedia Britannica Educational Corporation  
Copyright Date: 1979  
Interest Level: K-3  
Annotation: This program provides math readiness concepts for very young students. The readiness number sequence includes identifying groups of objects, looking for patterns and sequences, ordering, counting, and recognizing numerals.

Series Title: Money: Make Sense Out of Cents  
Individual Title: What Is a Penny Worth; Counting Your Change  
Description of Item & Its Components: 2 filmstrips, 2 cassettes, 1 teacher's guide  
Producer: Eye Gate Media  
Copyright Date: 1981  
Interest Level: 1-3  
Annotation: This set contains basic information to help young people identify money denominations--penny, nickel, dime, quarter, half-dollar and dollar--as well as the amount each is worth.

Series Title: Multi-Link Cubes  
Description of Item & Its Components: 250 cubes (25 cubes in 10 colors), teacher's manual  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: These snap together cubes can be used to teach number-operation concepts, spatial relationships, and visual perception skills. The manual offers activities in vocabulary words, such as more than, less than, same, equal, and so on.

Series Title: Multi-Link Number Track  
Description of Item & Its Components: Heavy-duty plastic track, teacher's manual  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: The number track is designed to be used with the Multi-Link Cubes. It comes in 10 sections that snap together to form a number-line through for the 2-cm cubes. Large Numbers are printed in block letters at 2-cm intervals from 0 to 100.

Nonprint Resources (continued):

Series Title: Numberboard Puzzle  
Description of Item & Its Components: A large wooden board cut into 10 sections  
Producer: Childcraft  
Copyright Date: 1980  
Interest Level: K-2  
Annotation: This aid helps students recognize numerals and reinforces their counting skills.

Series Title: Number Equalizer Balance  
Description of Item & Its Components: Number equalizer balance, teacher's guide  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This object offers the basic number facts of addition, subtraction, multiplication, and division. It also provides demonstrations of number sentences, renaming, and other important mathematical concepts.

Series Title: Number-Hole Template  
Description of Item & Its Components: The Template  
Producer: Developmental Learning Materials  
Interest Level: 1-3  
Annotation: This object can be used to track the numerals one through nine, plus zero. In addition, a series of domino-hole patterns from one to five can be traced in multiples or combinations to indicate number group.

Series Title: Numbers and Numerals All in a Row  
Individual Titles: 1 to 10, Then Do It Again; 10 to 20 is More than Plenty; 20 to 50 is Very Nifty; 50 to 99 Sounds Mighty Fine; 100 to 999, That's Quite a Climb; 1 to 1,000, Strike Up the Band.

Description of Item & Its Components: 6 filmstrips, 3 cassettes  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 1-3  
Annotation: This program provides the name and number symbol of each numeral, the value of each number and its system of progressive value ordering.

Nonprint Resources (continued):

- Series Title: Numbers at Work: Mathematics in the Real World  
 Individual Titles: Numbers: From Notches to Numerals; Time: From Moons to Microseconds; Computers: From Pebbles to Programs; Measurement: From Cubits to Centimeters; Money: From Barter to Banking
- Description of Item & Its Components: 11 filmstrips, 11 cassettes, teacher's guide  
 Producer: Guidance Associates  
 Copyright Date: 1979  
 Interest Level: 4-6  
 Annotation: This series of filmstrips provide a historical perspective of mathematics.
- Series Title: Numbers In Sweet Pickles  
 Individual Titles: Numbers; Numerals, Ordinals, Comparisons, Shape, Size, and Color; Introduction to Telling Time
- Description of Item & Its Components: 4 filmstrips, teacher's guide, duplicating masters, and math mats  
 Producer: BFA Educational Media  
 Copyright Date: 1979  
 Interest Level: PreK-3  
 Annotation: This series of filmstrips is designed to foster a positive attitude toward numbers by using Sweet Pickles characters and cartoon format.
- Series Title: Ordinal/Cardinal Puzzles  
 Description of Item & Its Components: 7 1/2" x 3 1/2" cards, instructions  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: These puzzles clarify the distinction between ordinal and cardinal numbers.
- Series Title: Our Gang Learns Arithmetic  
 Individual Titles: Judy's Birthday Party; Sets and Subsets; What Does the Sign + Mean?; What Does the Sign - Mean; What Does "How Many More" Mean?; What Does the Sign x Mean?; What Does the Sign ÷ Mean?; What Do the Signs > < = Mean?; Association by 10's; Telling Time by the Hour
- Description of Item & Its Components: 10 filmstrips  
 Producer: Eye Gate Media  
 Copyright Date: 1979  
 Interest Level: K-3  
 Annotation: This series is designed to teach arithmetical signs and processes.



Nonprint Resources (continued):

Title: Plus Fun 10/20-Plus Fun 50/100  
Description of Item  
& Its Components: 18" x 24" colorful gameboard and number tiles, teacher's manual.  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: This game reinforces the application of basic addition facts. It challenges students to find addends equaling sums of 50 to 100.

Title: Primary Mathematics Involvement Program  
Description of Item  
& Its Component: 200 activity cards, teacher's handbook, 16 number and shape generating charts, spirit masters, geoboard pegs, squares, cubes, number lines, graph paper, geometric models, beads, balance, metal weights, discs, rods, colored tape, colored labels, flat shapes, rulers, triangles, protractors, string, rubber bands, number squares, dice, dice labels, number cards, and movers.  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 4  
Annotation: This program is designed to teach basic math concepts such as numbers, geometry, and measurement.

Series Title: Primary Number Wheels  
Description of Item  
& Its Components: Number wheels  
Producer: Developmental Learning Materials  
Interest Level: 1-3  
Annotation: These wheels provide students with the relationships between numbers, their written equivalent, and their corresponding number of dots.

Series Title: Seeing the Use of Numbers--Set I  
Individual Titles: Count to Find Out; The Numbers 1 to 5; The Numbers 6 to 10; Groups of 2 to 10; Putting Groups Together; The Numbers 11 to 19; Taking A Group Apart; Time and Money; How Many In All?; How Many Are Left?; Vocabulary 1

Description of Item  
& Its Components: 10 filmstrips, 20 study charts  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 1-3  
Annotation: This series of filmstrips covers cardinal numbers.



Nonprint Resources (continued):

- Series Title: Seeing the Use of Numbers--Set V  
Individual Titles: Numbers, Numerals and Operations; Addition and Subtraction of Whole Numbers; Multiplication and Division of Whole Numbers; Factors and Products; Working with Fractions; Estimating Answers, Interpretating Answers; Measures; Perimeters and Areas; Addition and Subtraction of Fractions; Fractions in Decimal Notation
- Description of Item & Its Components: 10 filmstrips  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 4-6  
Annotation: This series of filmstrips is designed to help students organize and extend their knowledge of mathematical concepts and skills.
- Series Title: Seeing the Use of Numbers--Set VIII  
Individual Titles: Numbers and Numerals; Real Numbers; Adding Real Numbers; Multiplying Real Numbers; Instances and Consequences of Principles; Using Quantifiers; Subtracting and Dividing; Valid Inferences; Graphs on a Line; Graphs in a Plane
- Description of Item & Its Components: 10 filmstrips, 30 study charts  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 4-6  
Annotation: The purpose of these filmstrips is to reinforce the concepts in algebra.
- Series Title: Sorting Box and Accessories  
Description of Item & Its Components: Sorting Box, 6 code strips, 20 tiles for color and shapes matching, 60 tiles for number work  
Producer: Developmental Learning Materials  
Interest Level: 1-3  
Annotation: The sorting box is useful in teaching matching skills in number, color, and shape concepts.
- Title: Starting Off with Numbers  
Description of Item & Its Components: 40 laminated activity cards, teacher's guide  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This is an individualized program for developing fundamental math concepts and skills. It provides hands-on activities with readily available materials to build readiness and develop fundamental understanding in six key content areas: numbers and counting; area shapes and fractions; length; weight; time; shaping and capacity.

Nonprint Resources (continued):

Series Title: Stepping Stones Numerals  
Description of Item & Its Components: 10 rubber squares numbered 1-10  
Producer: Intac Inc./Instructo  
Interest Level: K-2  
Annotation: Stepping Stones Numerals are useful in helping students count in order, add, and subtract.

Title: Sun Clown  
Description of Item & Its Components: Complete puzzle (36 pieces), instruction sheet  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This puzzle provides simple addition facts. The six pictures are cut in half vertically, students must assemble the correct right and left sides to match one of eighteen puzzles containing an addition problem.

Series Title: Teambuilders: Multiplication  
Description of Item & Its Components: 18" x 24" board, 4 team cards, 81 small cards for each team, instructions  
Producer: Developmental Learning Materials  
Interest Level: 1-4  
Annotation: This game focuses on baseball, football, hockey, and basketball using math skills to play.

Series Title: Unique Math Games  
Description of Item & Its Components: 150 activity cards  
Producer: Educational Insight  
Copyright Date: 1979  
Interest Level: 3-6  
Annotation: These games offer drill in math through brain-teasers, puzzles, and sports.

Series Title: Using Numbers  
Individual Titles: How Many?; What Time?; Making; How Much?  
Description of Item & Its Components: 4 filmstrips, 4 cassettes/records  
Producer: Universal Education  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This series is designed to help students identify numbers.

Nonprint Resources (continued):

Series Title: Walk-on Number Line  
Description of Item & Its Components: 10" long vinyl red mat with block numerals 0-10.  
Producer: Intac Inc./Instructo  
Annotation: The Walk-on Number Line is a useful aid in helping the student count, add, and subtract.

Series Title: The Wonder of Numbers: Math Basics  
Individual Titles: Addition; Subtraction; Place Value; Multipli-  
cation; Division; Decimals; Fractions;  
Negative Numbers

Description of Item & Its Components: 8 filmstrips, 8 cassettes, 8 teacher's guides  
Producer: Guidance Associates  
Copyright Date: 1979  
Interest Level: K-6  
Annotation: This series of filmstrips explains basic mathematical skills through game playing, manipulatives, and observation. It works with concrete objects to help visualize mathematical concepts.



MATHEMATICS (Whole Number Operations)

The Student Will:

Add whole numbers 2.1.1  
Subtract whole numbers 2.1.2  
Multiply whole numbers 2.1.3  
Divide whole numbers 2.1.4

GOAL:

To perform mathematical manipulations

COMPETENCY:

Computing and solving open sentences

PRINT RESOURCES:

- |                 |                                                                                                                                                                                                               |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Author:         | Adler, David A.                                                                                                                                                                                               |
| Title:          | <u>Base Five</u>                                                                                                                                                                                              |
| Copyright Date: | 1975                                                                                                                                                                                                          |
| Publisher:      | Crowell                                                                                                                                                                                                       |
| Interest Level: | 3-5                                                                                                                                                                                                           |
| Annotation:     | Through questions and the use of objects, the author explains how to group and record in base ten and base five.                                                                                              |
|                 |                                                                                                                                                                                                               |
| Author:         | Adler, Peggy and Irving                                                                                                                                                                                       |
| Title:          | <u>Math Puzzles</u>                                                                                                                                                                                           |
| Copyright Date: | 1978                                                                                                                                                                                                          |
| Publisher:      | Watts                                                                                                                                                                                                         |
| Interest Level: | 4-6                                                                                                                                                                                                           |
| Annotation:     | This book provides forty-four mathematical puzzles.                                                                                                                                                           |
|                 |                                                                                                                                                                                                               |
| Author:         | Andree, Josephine                                                                                                                                                                                             |
| Title:          | <u>Cryptarithms</u>                                                                                                                                                                                           |
| Copyright Date: | 1979                                                                                                                                                                                                          |
| Publisher:      | Mu Alpha Theta                                                                                                                                                                                                |
| Interest Level: | 9-12                                                                                                                                                                                                          |
| Annotation:     | A very simple manual using puzzles to substitute letters for digits in simple arithmetic problems.                                                                                                            |
|                 |                                                                                                                                                                                                               |
| Author:         | Arthur, Lee, James, Elizabeth and Taylor, Judith B.                                                                                                                                                           |
| Title:          | <u>Sportsmath: How It Works</u>                                                                                                                                                                               |
| Copyright Date: | 1975                                                                                                                                                                                                          |
| Publisher:      | Lothrop                                                                                                                                                                                                       |
| Interest Level: | 4-9                                                                                                                                                                                                           |
| Annotation:     | This book explains the use of mathematics in sports through descriptions of events in football, baseball, hockey, basketball, and tennis, showing how mathematics is used to produce records in these sports. |



Print Resources (continued):

- Author: Asimov, Isaac  
Title: Realm of Numbers  
Copyright Date: 1977  
Publisher: Fawcett  
Interest Level: 6-9  
Annotation: This book provides a simple explanation of mathematical principles and procedures, beginning with simple arithmetic and moving on to more advanced mathematics.
- Author: Burns, Marilyn  
Title: The Brown Paper School Presents The I Hate Mathematics Book  
Copyright Date: 1975  
Publisher: Little  
Interest Level: 5-8  
Annotation: This book provides supplemental projects and fun things in math; measurement, probability, geometry, and number tricks.
- Author: Charosh, Mannis  
Title: Mathematical Games for One or Two  
Copyright Date: 1972  
Publisher: Crowell  
Interest Level: 5-8  
Annotation: A series of games presented in several variations for very talented students.
- Author: Gellert, W. and Others  
Title: The VNR Concise Encyclopedia of Mathematics  
Copyright Date: 1977  
Publisher: Von Nostrand  
Interest Level: 7-9  
Annotation: This is a very basic book on mathematics for talented students.
- Author: Gerstring, Judith L. and Kuczkowski, Joseph  
Title: Yes-No; Stop-Go; Some Patterns in Mathematical Logic  
Copyright Date: 1977  
Publisher: Crowell  
Interest Level: 3-5  
Annotation: This book introduces the reader to mathematical logic.
- Author: Trivett, John  
Title: Building Tables on Tables: A Book about Multiplication  
Copyright Date: 1975  
Publisher: Crowell  
Interest Level: K-3  
Annotation: The text of this book introduces the reader to many names for the same number through many activities.

Print Resources (continued):

Author: Wyler, Rose  
Title: Funny Number Tricks: Easy Magic with Arithmetic  
Copyright Date: 1976  
Publisher: Parents  
Interest Level: 1-2  
Annotation: Tricks and puzzles are used to review the knowledge of addition and subtraction.

NONPRINT RESOURCES:

Series Title: Arithmetic Drill and Practice  
Individual Titles: FaXactly Games: Basic Addition Facts; Basic Subtraction Facts; Basic Multiplication Facts; Basic Division Facts; FaXactly School Pack  
Description of Item & Its Components: 11" x 17" gameboards  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: 1-6  
Annotation: These gameboards are designed to help the students to become fact exact. Each gameboard focuses on a single fact to reinforce the tables.

Series Title: Arithmetic Fact Kit  
Description of Item & Its Components: Fact cards, self-help cards, factpacer, student record book, teacher's guide  
Producer: Science Research Associates  
Copyright Date: 1980  
Interest Level: 3-8  
Annotation: The purpose of this kit is to build computational speed, accuracy and mastery of addition, subtraction, multiplication and division.

Series Title: Basic Math Program Levels One Through Six  
Individual Titles: Level III--Numeration; Addition and Subtraction; Multiplication; More Multiplication; Division; Basic Properties; Number Sources; Geometry; Fractions; Measurements; Problem Solving; Elementary Numbers Theory  
Description of Item & Its Components: 12 filmstrips, teacher's guide  
Producer: Educational Projections Corporation  
Copyright Date: 1980  
Interest Level: 3  
Annotation: This series of filmstrips covers the basic principals so important to a functional understanding of mathematics.

Nonprint Resources (continued):

Series Title: Basic Math Skills For Everyday Life  
 Individual Titles: On The Payroll: Deciphering Your Salary; Eating Out; Unraveling Menu Mysteries; Sports Statistics: What Those Averages Mean; Comparison Shopping: A Really Good Buy?; Budget Basics: Making Money Meaningful; Planning A Trip: The Economics of Travel

Description of Item & Its Components: 6 filmstrips, 3 cassettes, spirit masters, teacher's guide  
 Producer: Eye Gate Media  
 Copyright Date: 1977  
 Interest Level: 9-12  
 Annotation: This series of filmstrips dramatizes everyday situations which require use of simple math computations for their successful resolution.

Series Title: Basic Skill Boosters: Beginning Math Adventures of the Lollipop Dragon  
 Individual Titles: Apple Blossom Introduces Cardinal Numbers; Herbert and Gwendolyn Learn Addition Sentences; The Lollipop Factory and Place Value; Apple Blossom Teaches Addition Facts Through 18; The Lollipop Dragon Presents Subtraction Facts

Description of Item & Its Components: 6 filmstrips/records/cassettes, teacher's manual, skill boosters  
 Producer: Society for Visual Education  
 Copyright Date: 1981  
 Interest Level: PreK-3  
 Annotation: This series of filmstrips uses Lollipop Dragon, Apple Blossom, and the Tuntum residents as vehicles to involve students in learning beginning math concepts. The skill boosters include exercises and activities which draw upon and complement the content of the scripts as well as a post-test for each filmstrip.

Series Title: Competency Skills in Arithmetic Series  
 Individual Title: Addition and Subtraction of Whole Numbers-- Module I

Description of Item & Its Components: 52 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
 Producer: The Center for Humanities  
 Copyright Date: 1979  
 Interest Level: 4-7  
 Annotation: This series of slides provides the basic arithmetic operations of addition and subtraction, discusses the decimal system, the concept of place value, and the operations of addition and subtraction on the whole numbers.



Nonprint Resources (continued):

- Series Title: Competency Skills in Arithmetic Series  
 Individual Title: Multiplication of Whole Numbers--Module II  
 Description of Item & Its Components: 41 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
 Producer: The Center for Humanities  
 Copyright Date: 1979  
 Interest Level: 4-7  
 Annotation: This series of slides examines principles and axioms fundamental to the multiplication equation; focuses on the commutative, associative and distributive laws; presents exercises involving working with zero, large numbers, and word problems.
- Series Title: Competency Skills in Arithmetic Series  
 Individual Title: Division of Whole Numbers--Module III  
 Description of Item & Its Components: 58 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
 Producer: The Center for Humanities  
 Copyright Date: 1979  
 Interest Level: 4-7  
 Annotation: This series of slides presents division tables; explains quotients, long division, products, remainders, the use of two digit divisors and rounding numbers for trial quotients and short divisions; analyzes division word problems.
- Series Title: Competency Skills in Arithmetic Series  
 Individual Title: Factors--Module IV  
 Description of Item & Its Components: 41 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
 Producer: The Center for Humanities  
 Copyright Date: 1979  
 Interest Level: 4-7  
 Annotation: These slides present the distinction between prime and composite numbers and discusses divisibility tests, the greatest common factor and the least common factor, and the least common multiple of two or more numbers.
- Series Title: Computation Skills Development Kit  
 Description of Item & Its Components: Diagnostic tests, exercise cards, reference cards  
 Producer: Science Research Associates  
 Copyright Date: 1980  
 Interest Level: 6-9  
 Annotation: This kit provides skills and drill in basic operations using whole numbers, fractions, decimals, and percents.

Nonprint Resources (continued):

Series Title: Computational Skills in Mathematics  
Individual Titles: Understanding and Using Whole Numbers: Understanding Our Numeration System; Learning and Using the Addition Facts; Learning and Using the Subtraction Facts; Subtracting Whole Numbers; Learning and Using the Multiplication Facts; Multiplying by One-Place Factors; Multiplying by Two-Place Factors; Learning and Using the Division Facts; Dividing by One-Place Divisors; Dividing by Two-Place Divisors

Description of Item & Its Components: 10 filmstrips, 10 cassettes, spirit masters, teacher's guide  
Producer: Pathescope Educational Media, Inc.  
Copyright Date: 1977  
Interest Level: 7-12  
Annotation: This series of filmstrips is designed to review the basic skills and computation of whole numbers. They will serve as a good supplement to any math program in an individual or group situation.

Series Title: How to Create Math Centers  
Description of Item & Its Components: 100 cards  
Producer: Educational Insights  
Copyright Date: 1979  
Interest Level: 3-6  
Annotation: These cards provide drill and comprehension in math centers.

Series Title: Know It All! Drill Wheels  
Description of Item & Its Components: Case, teacher's guide, 12 disks  
Producer: Educational Insights  
Copyright Date: 1979  
Interest Level: 1-6  
Annotation: This is a self-instructional manipulative for reinforcing math skills in addition, subtraction, multiplying, telling time, and recognizing money.

Series Title: Learning to Work with Numbers II  
Individual Titles: Sums and Differences to 18; Two and Three-Digit Addition; Two and Three-Digit Subtraction; Introduction to Multiplication

Description of Item & Its Components: 4 filmstrips, 2 cassettes  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 1-3  
Annotation: This series provides a structural presentation of addition and subtraction through sums of eighteen, and operations involving two- and three-digit numbers.

Nonprint Resources (continued):

Series Title: Learning to Work with Numbers III  
 Individual Titles: Addition with Renaming; Subtraction with Renaming; Multiplication and Division Through 25; One Digit Multiplication

Description of Item & Its Components: 4 filmstrips, 2 cassettes  
 Producer: Eye Gate Media  
 Copyright Date: 1979  
 Interest Level: 1-4  
 Annotation: This program shows how to add and subtract with renaming and how to do simple multiplication.

Series Title: Learning to Work with Numbers IV  
 Individual Titles: Addition and Subtraction with Renaming; Multiplication and Division Through 81; Two and Three Digit Multiplication; One Digit Division

Description of Item & Its Components: 4 filmstrips, 2 cassettes  
 Producer: Eye Gate Media  
 Copyright Date: 1979  
 Interest Level: 1-4  
 Annotation: This program is designed to teach multiplication to the early grades.

Series Title: Make Math Skills Easy!  
 Individual Titles: Let's Learn to: Add; Subtract; Multiply; Divide

Description of Item & Its Components: Records/cassettes, test pad  
 Producer: Educational Insights  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: This series of records helps students grasp math facts quickly.

Series Title: Math Big Box

Description of Item & Its Components: Discovery cards; ordinal/cardinal puzzles; Shopping List Game 1; plastic cubes; graduated boxes; photo number group cards; sensanumber track; roll and read problem maker; clock stamp; plastic clock; dimensional concept cylinders; number-hole template; coin stamps (U.S. heads)  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: These materials are useful in developing a wide range of math concepts and skills.



Nonprint Resources (continued):

- Series Title: Mathematics for Beginners  
Individual Titles: Counting and Comparing; Beginning Addition; Beginning Subtraction; Using Money  
Description of Item & Its Components: 4 filmstrips  
Producer: Encyclopaedia Britannica Educational Corporation  
Copyright Date: 1980  
Interest Level: K-3  
Annotation: This series provides simple addition and subtraction concepts. The program covers some measurement concepts.
- Series Title: Mathematics for Primary Series  
Individual Title: Mathematics for Primary: Division  
Description of Item & Its Components: 1 16mm film/videocassette, teacher's guide  
Producer: Paramount Communications  
Copyright Date: 1977  
Interest Level: 4-6  
Annotation: This film demonstrates, through familiar objects--toys, food, and articles of clothing--the basic concepts in division. It can be used in large or small group presentations for initial math concepts involving division.
- Series Title: Mathematics of Real Things  
Individual Titles: Number Concepts; Addition; Subtraction; Multiplication; Division  
Description of Item & Its Components: 5 filmstrips, teacher's guide  
Producer: Random House  
Copyright Date: 1980  
Interest Level: K-3  
Annotation: This series of filmstrips presents real things, like eggs in a carton, for counting and describes other simple math operations.
- Series Title: Money Big Box  
Description of Item & Its Components: Coin-value dominoes; coin-counting cards; cards; one-dollar bill stamp; five-dollar bill stamp; ten-dollar bill stamp; large stamp pad; U.S. heads coin stamp; U.S. tails coin stamp; coins and bills; money; dominoes; coin puzzles; money wheel; What's Your Change?; Drill Cards; Buy and Sell; Amusement Park Game; Money Game; Shopping Lists Game I; Shopping Lists Game II; teacher's manual  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: This package of materials provides a variety of learning activities in such areas as coin identification, identification of bills, money values, counting money, and making change.

Nonprint Resources (continued):

- Series Title: Money/Consumer Education  
Individual Title: Buying on Discount  
Description of Item & Its Components: 18" x 24" full color gameboard, 132 2" x 4" playing cards, 4 markers, 2 blackline masters, answer list, 1 die, instructions  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 3-6  
Annotation: This practical game reinforces fractions and decimal skills and teaches students how to compute sales discounts.
- Series Title: Multiplication of Fractions by Fractions  
Description of Item & Its Components: 15 transparencies  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 4-8  
Annotation: This series of transparencies is designed to show what happens when we multiply by fractions.
- Series Title: Numbrella Tree Series  
Individual Titles: Checked (Grade 2); Striped (Grade 3); Polka-Dot (Grade 4); Plaid (Grade 5)  
Description of Item & Its Components: 4 kits, each kit contains 20 games, markers, cards, spinners, teacher's guide  
Producer: Xerox Education Publications  
Copyright Date: 1977  
Interest Level: 2-5  
Annotation: This series of games is designed to help students in reviewing and extending basic math skills. The specific mathematical strands included in the games are: numeration, addition, subtraction, multiplication, division, fractions, time, money, geometry, and word problems.
- Series Title: Play Multiplication Bingo  
Description of Item & Its Components: 8 cassettes, bingo cards, score cards, checking cards, bingo chips, teacher's guide  
Producer: Educational Insights  
Copyright Date: 1979  
Interest Level: 3-6  
Annotation: This game builds retention of multiplication facts for students slow to grasp skills.
- Series Title: Science Research Associates Mathematics Drillpak  
Description of Item & Its Components: Complete kit includes: 220 full color slide cards, 10 markers, 10 plastic overlays, 1 pad of 40 pupil record sheets, and teacher's guide  
Producer: Science Research Associates (Peterman)  
Copyright Date: 1979  
Interest Level: 4-8

Nonprint Resources (continued):

- Series Title:** Money Big Box  
**Description of Item & Its Components:** Coin-value dominoes; coin-counting cards; cards; one-dollar bill stamp; five-dollar bill stamp; ten-dollar bill stamp; large stamp pad; U.S. heads coin stamp; U.S. tails coin stamp; coins and bills; money; dominoes; coin puzzles; money wheel; What's Your Change?; Drill Cards; Buy and Sell; Amusement Park Game; Money Game; Shopping Lists Game I; Shopping Lists Game II; teacher's manual  
**Producer:** Developmental Learning Materials  
**Copyright Date:** 1980  
**Interest Level:** 1-4  
**Annotation:** This package of materials provides a variety of learning activities in such areas as coin identification, identification of bills, money values, counting money, and making change.
- Series Title:** Numbrella Tree Series  
**Individual Titles:** Checked (Grade 2); Striped (Grade 3); Polka-Dot (Grade 4); Plaid (Grade 5)  
**Description of Item & Its Components:** 4 kits, each kit contains 20 games, markers, cards, spinners, teacher's guide  
**Producer:** Xerox Education Publications  
**Copyright Date:** 1977  
**Interest Level:** 2-5  
**Annotation:** This series of games is designed to help students in reviewing and extending basic math skills. The specific mathematical strands included in the games are: numeration, addition, subtraction, multiplication, division, fractions, time, money, geometry, and word problems.
- Series Title:** Play Multiplication Bingo  
**Description of Item & Its Components:** 8 cassettes, bingo cards, score cards, checking cards, bingo chips, teacher's guide  
**Producer:** Educational Insights  
**Copyright Date:** 1979  
**Interest Level:** 3-6  
**Annotation:** This game builds retention of multiplication facts for students slow to grasp skills.



Nonprint Resources (continued):

- Series Title: Science Research Associates Mathematics Drillpak  
Description of Item & Its Components: Complete kit includes: 220 full color slide cards, 10 markers, 10 plastic overlays, 1 pad of 40 pupil record sheets, and teacher's guide  
Producer: Science Research Associates (Peterman)  
Copyright Date: 1979  
Interest Level: 4-8  
Annotation: This is an in-depth skill coverage in the meaning of numbers, addition and subtraction, multiplication and division, decimals, fractions, word problems, measurement, and geometry.
- Series Title: Situational Math--Level I  
Individual Titles: Lab I--Addition and Subtraction, without Regrouping; Lab II--Addition and Subtraction, with Regrouping; Lab III--Multiplication and Division; Lab IV--Multiplication and Division, Advanced; Lab V--Fractions, Money and Measurement  
Description of Item & Its Components: 6 filmstrips  
Producer: Educational Reading Services  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: This program deals with basic mathematical processes.
- Series Title: Young Math Filmstrips  
Individual Titles: Bigger and Smaller; Estimation; Odds and Evens; What Is Symmetry?; Weighing and Balancing; Measure with Metric  
Description of Item & Its Components: 6 filmstrips, cassettes/records  
Producer: Random House  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: This series of filmstrips helps to extend, enrich, and improve the student's math skills. It is designed to teach the concepts and operations basic to the math program.

## MATHEMATICS (Mixed Number/Fraction Operations)

### The Student Will:

Add mixed numbers 2.1.5  
Subtract mixed numbers 2.1.6  
Multiply a whole number by a fraction 2.1.7  
Find a missing term in a proportion 2.1.13

### GOAL:

To perform mathematical manipulations

### COMPETENCY:

Computing and solving open sentences

### PRINT RESOURCES:

- |                 |                                                                                                                                                                           |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Author:         | Dennis, Richard J.                                                                                                                                                        |
| Title:          | <u>Fractions Are Parts of Things</u>                                                                                                                                      |
| Copyright Date: | 1973                                                                                                                                                                      |
| Publisher:      | Crowell                                                                                                                                                                   |
| Interest Level: | 2-4                                                                                                                                                                       |
| Annotation:     | This book introduces simple fractions, beginning with one-half through thirds and fourths.                                                                                |
|                 |                                                                                                                                                                           |
| Author:         | Froman, Robert                                                                                                                                                            |
| Title:          | <u>Less Than Nothing Is Really Something</u>                                                                                                                              |
| Copyright Date: | 1973                                                                                                                                                                      |
| Publisher:      | Crowell                                                                                                                                                                   |
| Interest Level: | 2-4                                                                                                                                                                       |
| Annotation:     | This book develops the concepts of positive and negative numbers and how they may be added and subtracted.                                                                |
|                 |                                                                                                                                                                           |
| Author:         | Lieberthal, Edwin M.                                                                                                                                                      |
| Title:          | <u>The Complete Book of Finger Math</u>                                                                                                                                   |
| Copyright Date: | 1979                                                                                                                                                                      |
| Publisher:      | McGraw-Hill                                                                                                                                                               |
| Interest Level: | 9-12                                                                                                                                                                      |
| Annotation:     | Practical techniques for using the fingers to solve a variety of complex as well as simple arithmetic operations, multiplication, division, and algebra are demonstrated. |
|                 |                                                                                                                                                                           |
| Author:         | Mathews, Louise                                                                                                                                                           |
| Title:          | <u>Gator Pie</u>                                                                                                                                                          |
| Copyright Date: | 1979                                                                                                                                                                      |
| Publisher:      | Dodd                                                                                                                                                                      |
| Interest Level: | 1-3                                                                                                                                                                       |
| Annotation:     | Concepts in fractions are explained when two alligators decide to cut up a pie for their friend.                                                                          |

# NONPRINT RESOURCES:

Series Title: Basic Math Program Levels One Through Six  
 Individual Titles: Level II--  
Place Value; Addition and Its Properties;  
Addition Algorithm; Subtraction; Geometry;  
Measurement--Linear and Liquid; Fractions;  
Addition and Subtraction on the Abacus; Number  
Sentences; Time and Money; Multiplication;  
Patterns in Numbers

Description of Item  
 & Its Components: 12 filmstrips, teacher's manual  
 Producer: Educational Projections Corporation  
 Copyright Date: 1980  
 Interest Level: 2  
 Annotation: This series of filmstrips covers the basic principles so important to a functional understanding of mathematics.

Series Title: Basic Math Program Levels One Through Six  
 Individual Titles: Level IV--  
Numeration Systems; Addition and Subtraction;  
Multiplication and Division; Geometry; Multi-  
plication--Computation I; Multiplication--  
Computation II; Number Theory; Division--  
Computation I; Division--Computation II;  
Measurement; Using Number Pairs; Fractions

Description of Item  
 & Its Components: 12 filmstrips, teacher's manual  
 Producer: Educational Projections Corporation  
 Copyright Date: 1980  
 Interest Level: 4  
 Annotation: This series of filmstrips covers the basic principles so important to a functional understanding of mathematics.

Series Title: Basic Math Program Levels One Through Six  
 Individual Titles: Level V--  
Numeration; Operations and Their Properties;  
Estimation; Factors and Primes; Geometry I;  
Geometry; Fractions; Rational Numbers;  
Addition and Subtraction of Rational Numbers;  
Decimals

Description of Item  
 & Its Components: 13 filmstrips, teacher's manual  
 Producer: Educational Projections Corporation  
 Copyright Date: 1980  
 Interest Level: 5  
 Annotation: This series of filmstrips covers the basic principles so important to a functional understanding of mathematics.



Nonprint Resources (continued):

- Series Title: Competency Skills in Arithmetic Series  
Individual Title: Introduction to Fractions--Module V  
Description of Item & Its Components: 52 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
Producer: The Center for Humanities  
Copyright Date: 1979  
Interest Level: 4-7  
Annotation: These slides introduce terms associated with fractions; discuss fractions as equals of a whole; explore mixed numbers, equivalent fractions, changing fractions to either lower or higher terms, finding the lowest common denominator, and conversion of mixed numbers to improper fractions.
- Series Title: Competency Skills in Arithmetic Series  
Individual Title: Addition and Subtraction of Fractions--Module VI  
Description of Item & Its Components: 57 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
Producer: The Center for Humanities  
Copyright Date: 1979  
Interest Level: 4-7  
Annotation: This series of slides presents techniques for the addition and subtraction of fractions with like and unlike denominators and explains the addition and subtraction of mixed numbers.
- Series Title: Competency Skills in Arithmetic Series  
Individual Title: Multiplication and Division of Fractions--Module VII  
Description of Item & Its Components: 47 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
Producer: The Center for Humanities  
Copyright Date: 1979  
Interest Level: 4-7  
Annotation: These slides present the multiplication of fractions and mixed numbers, reciprocals and their use in the division of fractions, the division of fractions by whole numbers, and dividing whole numbers by a fraction.

Nonprint Resources (continued):

Series Title: Computational Skills in Mathematics  
 Individual Titles: Understanding and Using Fractions: Naming Fractions; Finding Equivalent Fractions; Renaming Improper Fractions and Mixed Numbers; Adding and Subtracting Like Fractions and Mixed Numbers; Subtracting Unlike Fractions and Mixed Numbers; Multiplying Fractions; Multiplying Mixed Numbers; Dividing Fractions; Dividing Mixed Numbers

Description of Item & Its Components: 10 filmstrips, 10 cassettes, spirit masters, teacher's guide  
 Producer: Pathescope Educational Media, Inc.  
 Copyright Date: 1979  
 Interest Level: 7-12  
 Annotation: A series of filmstrips with cassettes that focus on remedial teaching of fractions.

Series Title: Concepts of Modern Mathematics, Part I  
 Individual Titles: Decimal Numeration System; Commutative Property; Associative Property; Distributive Property; Inequalities; The Number Line; Addition and Its Properties; Multiplication and Its Properties; Subtraction; Division

Description of Item & Its Components: 10 filmstrips  
 Producer: Universal Education  
 Copyright Date: 1980  
 Interest Level: 3-8  
 Annotation: This series of filmstrips covers the principle goals of an effective mathematics program. It emphasizes the decimal numeration system and the accompanying arithmetic operation.

Series Title: Cross-Number Puzzles  
 Description of Item & Its Components: Directions, workbook, spirit masters, answer sheets  
 Producer: Science Research Associates  
 Copyright Date: 1979  
 Interest Level: 4-8  
 Annotation: This program provides drill through the use of puzzles in whole numbers, fractions, decimals, and percents.

Series Title: Division of Fractions by Fractions  
 Description of Item & Its Components: 10 transparencies  
 Producer: Eye Gate Media  
 Copyright Date: 1979  
 Interest Level: 4-6  
 Annotation: These transparencies are designed to teach division of a fraction in a sequential method.

Nonprint Resources (continued):

- Series Title: Equivalent Fractions  
 Description of Item & Its Components: 6 transparencies  
 Producer: Eye Gate Media  
 Copyright Date: 1979  
 Interest Level: 4-6  
 Annotation: These transparencies show graphically how to raise fractions to higher terms and how to reduce fractions to the lowest terms.
- Series Title: Fractions: A New Approach, Group 1  
 Individual Titles: What-Are Fractions?; Fractions Equal to Greater Than One; Equivalent Fractions; Simplifying Fractions; Addition and Subtraction of Fractional Numbers; Addition and Subtraction of Mixed Numbers
- Description of Item & Its Components: 6 filmstrips, 3 cassettes, guides  
 Producer: Society for Visual Education  
 Copyright Date: 1971  
 Interest Level: 3-5  
 Annotation: Step-by-step instruction covers properties of fractions, orders of fractional numbers, multiplication and division of fractions and mixed numbers, and word problems.
- Series Title: Fractions: A New Approach, Group 2  
 Individual Titles: Properties of Operation: Fractions; Parts 1 and 2; Order of Fractional Numbers; Multiplication of Fractions and Mixed Numbers; Division of Fractions and Mixed Numbers; Parentheses and Word Problems
- Description of Item & Its Components: 6 filmstrips, 3 cassettes, guides  
 Producer: Society for Visual Education  
 Copyright Date: 1971  
 Interest Level: 3-5  
 Annotation: Step-by-step instruction covers properties of fractions, orders of fractional numbers, multiplication and division of fractions and mixed numbers, and word problems.
- Series Title: Fractions Come Alive  
 Individual Titles: What Is a Fraction?; Simple Multiplication; Equivalents; Multiplying and Dividing; Adding and Subtracting
- Description of Item & Its Components: 5 filmstrips, 5 cassettes, 30 skill boosters, teacher's guide  
 Producer: Society for Visual Education  
 Copyright Date: 1978  
 Interest Level: 4-8  
 Annotation: This series of filmstrips defines fractions and their properties, fractional equivalence, and the four basic arithmetic operations as applied to fractions.



Nonprint Resources (continued):

- Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Fractions  
Description of Item & Its Components: Fraction Bars, Fraction Bars Step-by-Step Teacher's Guide, Fraction Bars Step-by-Step Reproducible Workbook, Set of Fraction Bars, Fraction Bars Playing Cards, Fraction Bars Introductory Game Mat Set, Fraction Bars Complete Game Mat Set, Fraction Bars Spinner, Fraction Bars Game Markers, Transparent Fraction Bars, Fraction Bars Starter Set, Fraction Bars Step-by-Step Classroom Program  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: 1-9  
Annotation: This is a complete program of games and activities using manipulatives for teaching fractions. This program is sequenced to provide the transition from whole numbers to fractions.
- Series Title: Math All Around Us  
Individual Titles: Problem Solving with Mickey Mouse; Decimals with Donald Duck and Daisy; Estimating with Scrooge McDuck; Fractions with Huey, Dewey, and Louie; Graphs with Goofy; Math Careers with Ludwig Von Drake  
Description of Item & Its Components: 6 filmstrips, 6 cassettes, spirit masters, teacher's guide  
Producer: Walt Disney Educational Media Company  
Copyright Date: 1979  
Interest Level: 4-8  
Annotation: Each filmstrip illustrates a simple mathematical concept. The program begins by demonstrating a five-step problem-solving method that is emphasized in the following parts: decimals, fractions, graphs, and elementary calculator math.
- Series Title: Math House Proficiency Review Tapes  
Individual Titles: Operations with Whole Numbers and Fractions; Operations with Decimals and Percents; Applications Involving Measurement; Applications Involving Money  
Description of Item & Its Components: 4 cassettes, duplicating masters  
Producer: Math House  
Copyright Date: 1980  
Interest Level: 7-12  
Annotation: This program covers the skills and concepts of basic mathematics.

Nonprint Resources (continued):

- Series Title: Skill Modes--Level I  
Description of Item & Its Components: Stop-and-think cards, practice cards, student record books, student-directed skill cards  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 4-6  
Annotation: Level one of this program covers adding, subtracting, multiplying, and dividing whole numbers and converting, adding, and subtracting fractions.
- Series Title: Skill Modes--Level II  
Description of Item & Its Components: Stop-and-think cards, practice cards, student record books, student-directed skill cards  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 4-6  
Annotation: Level two of this program covers whole numbers, fractions, and mixed numbers.
- Series Title: Stumbling Blocks in Fractions  
Individual Titles: Language of Fractions; Equivalent Fractions; Addition and Subtraction of Fractions; Multiplication and Division of Fractions  
Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide  
Producer: Pathescope Educational Films  
Copyright Date: 1973  
Interest Level: 6-8  
Annotation: The series is problem-oriented, posing problems which young people might find in everyday life.
- Series Title: What Is a Fraction?  
Individual Titles: Numerators and Denominators; Improper and Mixed Numbers; Equivalent Fractions; Finding Common Denominators  
Description of Item & Its Components: 4 filmstrips, 2 cassettes  
Producer: BFA Educational Media  
Copyright Date: 1971  
Interest Level: 3-5  
Annotation: This series increases the viewer's understanding of fractions and their properties through an examination of the basic ideas on which fractions are based. Discovery and understanding are stressed, as opposed to rote memorization.

## MATHEMATICS (Decimal Operations)

### The Student Will:

Add decimals 2.1.8  
Subtract decimals 2.1.9  
Multiply decimals 2.1.10  
Divide decimals 2.1.11  
Find a percent of a number 2.1.12

### GOAL:

To perform mathematical manipulations

### COMPETENCY:

Computing and solving open sentences

### PRINT RESOURCES:

|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| Author:         | Froman, Robert                                                         |
| Title:          | <u>The Greatest Guessing Game; A Book About Dividing</u>               |
| Copyright Date: | 1978                                                                   |
| Publisher:      | Crowell                                                                |
| Interest Level: | 2-4                                                                    |
| Annotation:     | Real life situations are used to introduce the principles of division. |

### NONPRINT RESOURCES:

|                                       |                                                                                                                                                                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Series Title:                         | <u>Basic Math Program Levels One Through Six</u>                                                                                                                                                                                       |
| Individual Titles:                    | <u>Level VI-- Numeration Systems; Number Theory; Rational Numbers; Rational Numbers-- Multiplication; Rational Numbers--Division; Decimals; Decimals--Multiplication and Division; Probability; Ratio; Percent; Geometry; Graphing</u> |
| Description of Item & Its Components: | 13 filmstrips, teacher's manual                                                                                                                                                                                                        |
| Producer:                             | Educational Projections Corporation                                                                                                                                                                                                    |
| Copyright Date:                       | 1980                                                                                                                                                                                                                                   |
| Interest Level:                       | 6                                                                                                                                                                                                                                      |
| Annotation:                           | This series of filmstrips covers the basic principles so important to a functional understanding of mathematics.                                                                                                                       |



Nonprint Resources (continued):

- Series Title: Competency Skills in Arithmetic Series  
 Individual Title: Introduction to Decimal Fractions--Module VIII  
 Description of Item & Its Components: 53 slides in carousel cartridge, 1 filmstrip, 1 tape cassette, 1 LP record, practice sheet, teacher's guide  
 Producer: The Center for Humanities  
 Copyright Date: 1979  
 Interest Level: 4-7  
 Annotation: These slides focus on the concept of decimal place value and explain addition, subtraction, and multiplication of decimal fractions, multiplication by powers of ten, rounding off decimals, and the conversion of decimals and common fractions.
- Series Title: Computational Skills in Mathematics: Understanding and Using Decimals  
 Individual Titles: Reading and Writing Decimals; Comparing Decimals; Adding Decimals; Subtracting Decimals; Multiplying Decimals: Part I; Multiplying Decimals: Part II; Rounding Decimals; Dividing Decimals By a Whole Number; Changing Fractions to Decimals  
 Description of Item & Its Components: 10 filmstrips, 10 cassettes, duplicating masters, teacher's guide  
 Producer: Pathescope  
 Copyright Date: 1975  
 Interest Level: 7-12  
 Annotation: This series of filmstrips presents the various operations involving decimals and factual content within a problem-solving setting.
- Series Title: Concepts of Modern Mathematics, Part II  
 Individual Titles: The Decimal (Base Ten Numeration System); Using the Number Line; Equalities and Inequalities; The Communicative Property in Addition and Multiplication; Application of the Associative Property; The Distributive Principle and Its Use; Meaning of Common Fractions; Addition and Subtraction of Common Fractions; Addition and Subtraction of Decimal Fractions; Areas of Polygons  
 Description of Item & Its Components: 10 filmstrips  
 Producer: Universal Education  
 Copyright Date: 1980  
 Interest Level: 3-8  
 Annotation: This series of filmstrips covers the principle goals of an effective mathematics program. It emphasizes the decimal numeration system and the accompanying arithmetic operation.

Nonprint Resources (continued):

Series Title: Concepts of Modern Mathematics, Part III  
 Individual Titles: Union and Intersection of Sets; Order of Operations; Solving Open Sentences; Graphing Sentences in a Plane; Factoring and Primes; Percents, Decimals, and Common Fractions; Addition and Subtraction of Integers; Identity Elements and Inverses; The Real Number Line; Base Five Numeration System

Description of Item & Its Components: 10 filmstrips  
 Producer: Universal Education  
 Copyright Date: 1980  
 Interest Level: 3-8  
 Annotation: This series of filmstrips covers the principle goals of an effective mathematics program. It emphasizes the decimal numeration system and the accompanying arithmetic operation.

Series Title: Cross-Number Puzzles: Story Problems  
 Description of Item & Its Components: 200 puzzles, directions, workbook/spiritmaster answer  
 Producer: Science Research Associates  
 Copyright Date: 1980  
 Interest Level: 4-6  
 Annotation: This kit provides practice in translating words into mathematical situations. It includes sections on whole numbers, fractions, mixed fractions, decimals, and percents.

Series Title: Decimals  
 Individual Titles: Decimals: Meaning and Rounding Off; Decimals: Addition and Subtraction; Decimals: Multiplication and Division; Decimals: Practical Applications

Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide, spirit masters  
 Producer: Society for Visual Education  
 Copyright Date: 1978  
 Interest Level: 9-12  
 Annotation: This series of filmstrips presents the four arithmetic computations, including naming decimals, place value, zeroes within decimals, fractional and mixed number equivalents, rounding off and estimating, and practical applications of decimals.

Series Title: Decimals and Percentage  
 Individual Titles: Introducing Decimal Notation; Expressing Common Fractions as Decimal Fractions; Comparing Fractions Using Decimal Notations; Addition and Subtraction of Decimals; Multiplication of Decimals; Division of Decimals by Whole Numbers and Decimal Fractions; Introducing Percent; Solving Problems in Percentage; More Problems in Percentage

Nonprint Resources (continued):

Description of Item  
& Its Components: 9 filmstrips  
Producer: Educational Projections Corporation  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: This series of filmstrips provides strategies for solving problems in decimals and percentages.

Series Title: Fundamentals of Business Mathematics  
Individual Titles: Merchandizing; Payroll and Taxes; Insurance; Depreciation; Interest; Annuities; Installment Buying and Loans

Description of Item  
& Its Components: 7 filmstrips, 7 cassettes, 7 practice sheets, 7 teacher's guides  
Producer: Guidance Associates  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: This series of filmstrips is designed to give students a solid foundation in the basic principles of business mathematics.

Series Title: Guinness World Records: Fractions, Decimals, and Percent  
Individual Titles: Problem Solving with Proper Fractions; Problem Solving with Improper Fractions; Problem Solving with Decimals; Problem Solving with Percents

Description of Item  
& Its Components: 4 filmstrips, 4 cassettes, 1 teacher's guide, 4 worksheet sets  
Producer: Society for Visual Education  
Copyright Date: 1980  
Interest Level: 4-6  
Annotation: The four filmstrips in this series deal with fractions, improper fractions, decimals, and percents. Statistics from the popular book, The Guinness Book of World Records, are used to make up the problems.

Series Title: Mathematics--Life's Number Game  
Description of Item  
& Its Components: 1 16mm film/videocassette, teacher's guide  
Producer: Coronet Instructional Media Company  
Copyright Date: 1978  
Interest Level: 7-9  
Annotation: This film shows how fractions, percents, averages, metric conversions, area and volume formulas, protractors and compasses, and basic math skills are employed in job-related situations by a variety of people.



Nonprint Resources (continued):

Series Title: Mathematics Techniques for Science Students  
 Individual Title: Approximation  
 Description of Item  
 & Its Components: 1 filmstrip, 1 cassette, 56 slides, teacher's guide  
 Producer: Prentice-Hall Media, Inc.  
 Copyright Date: 1979  
 Interest Level: 9-12  
 Annotation: This filmstrip explains the process of approximation for physical quantities and numerical values. Rules for assigning significant figures and for rounding to one or more digits are provided and applied.

Series Title: Multiplication and Division  
 Individual Titles: Multiplication; Division; Mixed Operations; Multiplication and Division; Practical Applications; Multiplication and Division  
 Description of Item  
 & Its Components: 4 filmstrips, 4 cassettes, teacher's guide  
 Producer: Society for Visual Education  
 Copyright Date: 1978  
 Interest Level: 9-12  
 Annotation: The four-part program deals with multiplication in relation to addition; multiplying combinations of one-, two-, and three-digit numbers; rounding off; estimating; multiplying by 10s and 100s; long division; short division; remainders; estimating answers; problems requiring two or more arithmetic computations; and word problems.

Series Title: Multiplication Rock  
 Individual Titles: Elementary, My Dear (Two's); Three Is a Magic Number; The Four-Legged Zoo; Ready or Not, Here I Come (Five's); I Got Six; Lucky Seven Sampson; Figure Eight; Naughty Number Nine; My Hero Zero; The Good Eleven; Little Twelve-toes  
 Description of Item  
 & Its Components: 11 filmstrips, 11 cassettes, teacher's guide, duplicating masters, 24"x36" poster  
 Producer: Guidance Associates  
 Copyright Date: 1979  
 Interest Level: 2-6  
 Annotation: This series of filmstrips focuses on the multiplication tables from two through twelve.

Nonprint Resources (continued):

- Series Title: New Dimensions in Decimals  
Individual Titles: Place Value and the Decimal Point; Addition and Subtraction of Decimals; Multiplication of Decimals; Division of Decimals  
Description of Item & Its Components: 4 filmstrips, 2 cassettes, 24 skill sheets, 1 guide  
Producer: Society for Visual Education  
Copyright Date: 1973  
Interest Level: 4-6  
Annotation: This series of filmstrips highlights the fundamental relationships between ratios, fractions, and decimals. Concise narrations offer explanations of the basic operations involved in working with decimals.
- Series Title: New Dimensions in Percent  
Individual Titles: Meaning of Percent; Conversion of Fractions, Decimals, and Percents; Percents As Ratios; Working with Percentages  
Description of Item & Its Components: 4 filmstrips, 2 cassettes, 24 skill sheets, 1 guide  
Producer: Society for Visual Education  
Copyright Date: 1976  
Interest Level: 4-6  
Annotation: A step-by-step approach helps clarify definitions, operations, and practical applications of percents. Students can learn to figure discounts, taxes, and simple percents. Both traditional and modern notations are used.
- Series Title: Skill Modes--Level III  
Description of Item & Its Components: Stop-and-think cards, practice cards, student record books, student-directed skill cards  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 4-6  
Annotation: Level three of this program covers whole numbers, fractions, mixed numbers, decimals, and percents.

## MATHEMATICS (Measurement)

### The Student Will:

Find perimeter and area of simple polygon 3.2.1  
Choose appropriate unit of measure 3.2.3  
Read scales on measuring instruments 2.2.1  
Find elapsed time 5.1.6

### GOAL:

To perform mathematical manipulations  
To understand concepts and processes  
To use mathematical reasoning and processes to meet personal and societal needs

### COMPETENCY:

Measuring and constructing  
Understanding geometric properties and measurement  
Understanding properties and processes of the number system  
Solving personal/societal problems

### PRINT RESOURCES:

Author: Adler, David  
Title: 3D, 2D, 1D  
Copyright Date: 1975  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: This unique book provides an introduction to the meaning of measurement, area, volume, and length by way of examining one, two, and three dimensional figures.

Author: Adler, Irving  
Title: The Changing Tools of Science: From Yardstick to Synchrotron  
Copyright Date: 1973  
Publisher: Day  
Interest Level: 7-8  
Annotation: This book explains how people measure, analyze, and change the universe through instruments that measure, weigh, listen to, break, sift, mix, heat, and freeze things.

Author: Allington, Richard L.  
Title: Shapes  
Copyright Date: 1979  
Publisher: Raintree  
Interest Level: K-2  
Annotation: This book explains twenty geometric figures and lists activities involving shapes and sizes.



Print Resources (continued):

- Author: Asimov, Isaac  
Title: Asimov On Numbers  
Copyright Date: 1978  
Publisher: Doubleday  
Interest Level: 9-12  
Annotation: This collection of essays focuses on Roman and Arabic numerals, the metric system, calendars, arcane systems of measurement, the mysteries of pie, and astronomical numbers.
- Author: Baird, Eva-Lee and Rose Wyler  
Title: Going Metric the Fun Way  
Copyright Date: 1980  
Publisher: Doubleday  
Interest Level: 3-5  
Annotation: Through puzzles, games, and jokes the metric system is explained.
- Author: Barrett, Peter and Susan  
Title: The Circle Sarah Drew  
Copyright Date: 1973  
Publisher: Scroll Press  
Interest Level: PreK-2  
Annotation: This book discusses the meaning of the circle drawn on each page.
- Author: Barrett, Peter and Susan  
Title: The Line Sophie Drew  
Copyright Date: 1973  
Publisher: Scroll Press  
Interest Level: K-2  
Annotation: This book presents the line in a series of questions around what it represents.
- Author: Barrett, Peter and Susan  
Title: The Square Ben Drew  
Copyright Date: 1973  
Publisher: Scroll Press  
Interest Level: PreK-2  
Annotation: This book presents the square in a series of questions around what it represents.
- Author: Behrens, June  
Title: True Book of Metric Measurement  
Copyright Date: 1975  
Publisher: Children's Press  
Interest Level: K-3  
Annotation: This book gives the various units of the metric system--centimeters, meters, kilometers, grams, kilograms, liters, milliliters, and Celsius degrees.

Print Resources (continued):

- Author: Berger, Melvin  
Title: Time After Time  
Copyright Date: 1973  
Publisher: Coward  
Interest Level: 2-6  
Annotation: This book provides an explanation of time and how it can be measured. It includes examples of the effect of time on living things.
- Author: Berloquin, Pierre  
Title: One Hundred Geometric Games  
Copyright Date: 1976  
Publisher: Scribner  
Interest Level: 7-9  
Annotation: The author provides one hundred geometric puzzles with answers.
- Title: Betty Crocker's Cookbook for Boys and Girls  
Copyright Date: 1975  
Publisher: Western  
Interest Level: 5-9  
Annotation: This is a very comprehensive cookbook for the very young, using measurements.
- Author: Bitter, Gary and Thomas Metos  
Title: Exploring with Metrics  
Copyright Date: 1975  
Publisher: Messner  
Interest Level: 3-5  
Annotation: This book provides an introduction to the historical development of systems of measurement and to metric liter, meter, and gram. It ranges from primitive measurements through modern metric devices.
- Author: Bowles, D. Richard  
Title: Make Way for Metrication  
Copyright Date: 1975  
Publisher: Lerner  
Interest Level: 7-9  
Annotation: The book describes the history, development, and use of the metric system, including a discussion of its adoption in America.
- Author: Branley, Franklyn  
Title: How Little and How Much: A Book About Scales  
Copyright Date: 1976  
Publisher: Crowell  
Interest Level: 4-7  
Annotation: This book provides a history of measuring scales and how they are used, including Fahrenheit and Celsius.

Print Resources (continued):

- Author: Branley, Franklyn  
Title: Measure with Metric  
Copyright Date: 1975  
Publisher: Crowell  
Interest Level: K-3  
Annotation: This book explains metric units of length, mass, and volume. It has good activities for introducing measurement.
- Author: Breiter, Herta S.  
Title: Time and Clocks  
Copyright Date: 1978  
Publisher: Raintree  
Interest Level: 2-4  
Annotation: This is a very useful book on telling time for beginners.
- Author: Brummitt, Wyatt  
Title: Kites  
Copyright Date: 1971  
Publisher: Western  
Interest Level: 4-8  
Annotation: This book has a series of diagrams describing flat, box, tetrahedral, and delta-wing kites. It makes use of measurement concepts.
- Author: Burns, Marilyn  
Title: This Book Is About Time  
Copyright Date: 1978  
Publisher: Little  
Interest Level: 5-7  
Annotation: This book explores the concept of time and the history of the calendar.
- Author: Carini, Edward  
Title: Take Another Look  
Copyright Date: 1970  
Publisher: Prentice  
Interest Level: 4-8  
Annotation: This book explains optical illusions.
- Author: Carle, Eric  
Title: My Very First Book of Shapes  
Copyright Date: 1974  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: The author demonstrates how objects are matched with geometric shapes.



Print Resources (continued):

- Author: Charosh, Mannis  
Title: Ellipse  
Copyright Date: 1971  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: This book gives directions for sketching and constructing ellipses.
- Author: Charosh, Mannis  
Title: Straight Lines, Parallel Lines, Perpendicular Lines  
Copyright Date: 1972  
Publisher: Crowell  
Interest Level: 3-4  
Annotation: This book explains the interrelationships of various kinds of lines and cites examples.
- Author: Children's Television Workshop  
Title: Sesame Street Book of Shapes  
Copyright Date: 1970  
Publisher: Little, Brown  
Interest Level: K-2  
Annotation: Circles, squares, rectangles, and triangles are introduced by the Sesame Street characters.
- Author: Clark, Alice and Carol Leitch  
Title: Amusements in Developing Algebra Skills-- Volumes 1 & 2  
Copyright Date: 1977  
Publisher: Midwest Publications  
Interest Level: 6-12  
Annotation: These practice exercises are demonstrated in cross number puzzles, line designs, decodes, picture graphs, optical illusions, and others.
- Author: Clark, Alice and Carol Leitch  
Title: Amusements in Developing Geometry Skills  
Copyright Date: 1977  
Publisher: Midwest Publications  
Interest Level: 3-9  
Annotation: These activities are practice exercises embedded in puzzles, line designs, decodes, optical illusions, and others.
- Author: Daly, Kathleen  
Title: Today's Biggest Animals  
Copyright Date: 1977  
Publisher: Western  
Interest Level: 2-5  
Annotation: This book describes twenty of the largest animals, including the measurements of length and weight.

Print Resources (continued):

Author: Deming, Richard  
Title: Metric Tower: Why and How We Are Going Metric  
Copyright Date: 1974  
Publisher: Nelson  
Interest Level: 6-9  
Annotation: This book discusses the advantages of the metric system and its history.

Author: Ellison, Elsie  
Title: Fun with Lines and Curves  
Copyright Date: 1972  
Publisher: Lothrop  
Interest Level: 3-12  
Annotation: A unique book that discusses the art of stitching curve drawings, the use of rulers, protractors, compasses, and directions for constructing hexagons, octagons, pentagons, and five-pointed stars.

Author: Feirer, John L.  
Title: S I Metric Handbook  
Copyright Date: 1977  
Publisher: Scribner  
Interest Level: 7-9  
Annotation: A handy reference tool on the metric system.

Author: Feltser, Eleanor  
Title: The Sesame Street Book of Shapes  
Copyright Date: 1970  
Publisher: Little, Brown  
Interest Level: PreK-1  
Annotation: A beginner's book on squares, circles, rectangles, and triangles.

Author: Fey, James  
Title: Long, Short, High, Low, Thin, Wide  
Copyright Date: 1971  
Publisher: Crowell  
Interest Level: 4-6  
Annotation: This book presents many activities in the measurement of length.

Author: Friskey, Margaret  
Title: Three Sides and the Round One  
Copyright Date: 1973  
Publisher: Children's Press  
Interest Level: 1-3  
Annotation: Round One demonstrates how he is the eyes of an owl, the yellow moon, a rubber ball, and a big balloon. There are examples of alternates of roundness such as the circle and sphere, ovals, squares, and rectangles.

Print Resources (continued):

- Author: Froman, Robert  
Title: Angles Are Easy As Pie  
Copyright Date: 1976  
Publisher: Crowell  
Interest Level: 3-5  
Annotation: This book explains the characteristics of angles through activities of several hungry alligators.
- Author: Froman, Robert  
Title: Venn Diagrams  
Copyright Date: 1972  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: The reader is introduced to Venn diagrams and their use to solve various mathematical problems.
- Author: Gibbons, Gail  
Title: Clocks and How They Go  
Copyright Date: 1979  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: This book explains how clocks work.
- Author: Gilleo, Alma  
Title: About the Thermometer  
Copyright Date: 1977  
Publisher: Child's World  
Interest Level: 3-4  
Annotation: Through Hobo, the clown, the Celsius thermometer is explained.
- Author: Hahn, James and Lynn Hahn  
Title: The Metric System  
Copyright Date: 1975  
Publisher: Watts  
Interest Level: 6-9  
Annotation: This book provides a history of the metric system.
- Author: Hefter, Richard  
Title: The Strawberry Book of Shapes  
Copyright Date: 1976  
Publisher: Larousse  
Interest Level: 1-3  
Annotation: This book uses circles, squares, and rectangles to highlight the activities of a family of bears and friends.
- Author: Heller, Ruth  
Title: Designs for Coloring  
Copyright Date: 1976  
Publisher: Grosset  
Interest Level: 1-3  
Annotation: Designs are developed as the artist selects colors accordingly.



Print Resources (continued):

- Author: Hess, Adrien L.  
Title: Four-Dimensional Geometry--An Introduction  
Copyright Date: 1977  
Publisher: National Council of Teachers of Mathematics  
Interest Level: 6-9  
Annotation: This book outlines ways to study configurations and applications for 4-D geometry through drawings and models.
- Author: Hoban, Tana  
Title: Circles, Triangles, and Squares  
Copyright Date: 1974  
Publisher: Macmillan  
Interest Level: 4-6  
Annotation: Circles, triangles, and squares are demonstrated through photographs.
- Author: Horemis, Spyros  
Title: Geometrical Design Coloring Book  
Copyright Date: 1973  
Publisher: Dover  
Interest Level: 1-6  
Annotation: This is a coloring book that demonstrates a multiple of designs using geometric shapes.
- Author: Jespersen, James and Jane Fitz-Randolph  
Title: Time and Clocks for the Space Age  
Copyright Date: 1979  
Publisher: Atheneum  
Interest Level: 6-9  
Annotation: This book provides an introduction to time and its measurement.
- Author: Kelly, Gerard W.  
Title: Metric System Simplified  
Copyright Date: 1976  
Publisher: Sterling  
Interest Level: 5-9  
Annotation: This book gives an account of the history of conversions between metric and customary units and within the metric system, using metrics in the kitchen, in science, with the automobile, and other everyday activities.
- Author: Lamm, Joyce  
Title: Let's Talk About the Metric System  
Copyright Date: 1974  
Publisher: Jonathan David  
Interest Level: 3-6  
Annotation: This book explains the historical development of measurement and discusses large multiples and small subdivisions of the meter such as megameter, gigameter, micron, and pictometer.

Print Resources (continued):

- Author: Mayer, Mercer  
Title: Bubble, Bubble  
Copyright Date: 1973  
Publisher: Parents' Magazine  
Interest Level: 1-3  
Annotation: This is a story of how bubbles are blown to take on many shapes.
- Author: Mims, Forrest  
Title: Number Machines  
Copyright Date: 1977  
Publisher: McKay  
Interest Level: 5-9  
Annotation: This book gives the history of the metric system and applications of the metric system in sports, recreation, science, and technology.
- Author: Morganstern, Steve  
Title: Metric Puzzles, Tricks and Games  
Copyright Date: 1977  
Publisher: Sterling  
Interest Level: 3-6  
Annotation: Through the use of puzzles, tricks, and games the metric system is explained.
- Author: Phillips, Jo  
Title: Exploring Triangles: Paper Folding Geometry  
Copyright Date: 1975  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: This book introduces angle bisectors, perpendicular bisectors, and the medians of a triangle through paper-folding activities.
- Author: Phillips, Jo  
Title: Right Angles: Paper Folding Geometry  
Copyright Date: 1972  
Publisher: Crowell  
Interest Level: 1-4  
Annotation: The reader is instructed on how to make right angles through paper folding.
- Author: Pienkowski, Jan  
Title: Shapes  
Copyright Date: 1975  
Publisher: Harvey House  
Interest Level: 1-3  
Annotation: This is a very good book on shapes for the very young.

Print Resources (continued):

- Author: Pine, Tillie S. and Levine, Joseph  
Title: Measurements and How We Use Them  
Copyright Date: 1977  
Publisher: McGraw  
Interest Level: 1-4  
Annotation: This book introduces measurements and their uses in a variety of situations.
- Author: Radlauer, Edward  
Title: Motorcycle Mania  
Copyright Date: 1973  
Publisher: Children's Press  
Interest Level: 1-3  
Annotation: Through the use of motorcycles, the author shows examples of many geometric shapes and opportunities for counting.
- Author: Rahn, Joan Elma  
Title: Metric System  
Copyright Date: 1976  
Publisher: Atheneum  
Interest Level: 6-9  
Annotation: The metric system is discussed as it relates to the United States.
- Author: Ranucci, Ernest R.  
Title: Curiosities of the Cube  
Copyright Date: 1977  
Publisher: Crowell  
Interest Level: 6-8  
Annotation: This book offers a variety of exercises to explain the use of visualization and imagination of the cube.
- Author: Rothenberg, Ronald I.  
Title: Finite Mathematics  
Copyright Date: 1980  
Publisher: Wiley  
Interest Level: 10-12  
Annotation: This book explains with examples of mathematical logic, set theory, linear programming, matrix algebra, and probability with self-tests and answers to aid in review.
- Author: Segan, Ann  
Title: One Meter Max  
Copyright Date: 1979  
Publisher: Prentice-Hall  
Interest Level: K-2  
Annotation: This book introduces measuring with the metric system.



Print Resources (continued):

- Author: Shimek, William J.  
Title: The Celsius Thermometer  
Copyright Date: 1975  
Publisher: Lerner  
Interest Level: 1-3  
Annotation: This book explains the basic workings of the thermometer.
- Author: Shimek, William J.  
Title: The Metric System  
Copyright Date: 1975  
Publisher: Lerner  
Interest Level: K-2  
Annotation: This author emphasizes that the metric system has a decimal base and that all the units in the system are multiples or subdivisions of ten.
- Author: Shimek, William J.  
Title: The Meter  
Copyright Date: 1975  
Publisher: Lerner  
Interest Level: 2-5  
Annotation: This book demonstrates how to measure length, distance, width, and height in meters.
- Author: Shimek, William J.  
Title: The Liter  
Copyright Date: 1975  
Publisher: Lerner  
Interest Level: 2-5  
Annotation: A unique book explaining liter measurements.
- Author: Shimek, William J.  
Title: The Gram  
Copyright Date: 1975  
Publisher: Lerner  
Interest Level: 2-5  
Annotation: This book demonstrates how the metric system works in determining the weight or mass of an object, an animal, or a person.
- Author: Sitomer, Mindel and Harry  
Title: Circles  
Copyright Date: 1971  
Publisher: Crowell  
Interest Level: 2-4  
Annotation: The concepts of radius and circumference are explained.

Print Resources (continued):

- Author: Sitomer, Mindel and Harry  
Title: What Is Symmetry?  
Copyright Date: 1970  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: Lines of symmetry and symmetric figures are explained through paper-folding activities.
- Author: Srivastana, Jane Jonas  
Title: Area  
Copyright Date: 1974  
Publisher: Crowell  
Interest Level: 2-3  
Annotation: This book develops the concept of area and how to measure it.
- Author: Srivastana, Jane Jonas  
Title: Spaces, Shapes and Sizes  
Copyright Date: 1980  
Publisher: Crowell  
Interest Level: PreK-2  
Annotation: This book explains concepts involving volume.
- Author: Srivastana, Jane Jonas  
Title: Weighting and Balancing  
Copyright Date: 1970  
Publisher: Crowell  
Interest Level: 1-4  
Annotation: This book explains balancing/weighing experiments.
- Author: Stover, Allan C.  
Title: You and the Metric System  
Copyright Date: 1974  
Publisher: Dodd  
Interest Level: 6-9  
Annotation: This book provides a very basic introduction to the metric system, its logic, and the necessity of the U.S. conversion to its use.
- Author: Trivett, Daphne  
Title: Shadow Geometry  
Copyright Date: 1974  
Publisher: Crowell  
Interest Level: 1-3  
Annotation: This book shows how geometric figures are produced by using paper, scissors, and a light source.

Print Resources (continued):

Author: Walter, Marion  
Title: Boxes, Squares, and Other Things: A Teacher's Guide for a Unit in Informal Geometry  
Copyright Date: 1970  
Publisher: National Council of Teachers of Mathematics  
Interest Level: 1-4  
Annotation: A very good source for helping children visualize two- and three-dimensional objects and for introducing geometric transformations, symmetry, and group theory.

Author: Walter, Marion  
Title: Look at Annette  
Copyright Date: 1971  
Publisher: Evans  
Interest Level: PreK-2  
Annotation: A mirror is used to explain the concept of symmetry.

Author: Wiznitzer, Martine Rongier  
Title: Power Skills in Mathematics  
Copyright Date: 1979  
Publisher: McGraw-Hill  
Interest Level: 10-12  
Annotation: This book provides practice questions for the arithmetic, algebra, and measurement sections of the high school equivalency examination.

NONPRINT RESOURCES:

Series Title: Area Volumes  
Description of Item & Its Components: Wooden cubes, metric volume blocks, centimeter cubes, centimeter cube base, The Cube Connection: Activities and Investigations with Interlocking Centimeter Cubes, graph paper sheets, grid stamp, dot paper, and transparent grids  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: K-12  
Annotation: These tools are essential in the teaching of area/volume.



Nonprint Resources (continued):

Series Title: Arithmetic Vocabulary  
Individual Titles: Vocabulary for Comparing; We Add and We Subtract; We Measure How Much or How Many; We Measure How Much or How Many When We Shop; Dividing Wholes into Equal Parts (Halves, Quarters, Thirds); Groups and Members That Make Up the Group; Using More Advanced Measurements When We Shop; More Advanced Equal Parts of a Whole--5ths, 6ths, 7ths, 8ths, and 9ths

Description of Item & Its Components: 8 filmstrips  
Producer: Educational Projections Corporation  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: This series provides material for experiences in basic mathematics.

Series Title: Aspects of Geometry  
Individual Titles: Symmetry; Thinking in Three Dimensions; Topology

Description of Item & Its Components: 3 filmstrips  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 9-12  
Annotation: This series provides an introduction to geometry.

Series Title: Basic Metric Concepts  
Individual Titles: The Metric-Go-Round; Metric Fun for Everyone; I'm Thinking Metric

Description of Item & Its Components: 3 records/cassettes, duplicating masters, guides  
Producer: Random House  
Copyright Date: 1980  
Interest Level: K-6  
Annotation: This series provides metric words and concepts through songs.

Series Title: Building Competency Skills in Math  
Individual Titles: Basic Math Operations; Working with Fractions; Working with Decimals; Basic Geometry--Finding Area and Perimeter

Description of Item & Its Components: 4 filmstrips, text/workbook, spirit masters, teacher's guide  
Producer: Troll  
Copyright Date: 1981  
Interest Level: 4-6  
Annotation: This series of filmstrips provides practice in fundamental operations with whole numbers, fractions, decimals, and geometric measurement.

Nonprint Resources (continued):

- Series Title: Capacity/Volume  
Description of Item & Its Components: Graduated liter pitcher, liter volume set, liter volume cube, metric dry measure set, metric spoon set, metric graduated cylinders, metric graduated beakers, cubic meter kit  
Producer: Creative Publications  
Copyright Date: 1982  
Interest Level: K-12  
Annotation: These instruments are useful when students are determining capacity and volume in units of measurement.
- Series Title: Geometry Construction Books and Tools  
Description of Item & Its Components: Chalkboard rule, chalkboard compass, chalkboard protractor, plastic shape tracers, combined tracer set, geo-shapes tracer, circular protractor, angle-master protractor, protractor, circle master compass, plastic center locator  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: 4-9  
Annotation: These manipulatives are very useful in becoming skillful in geometry.
- Series Title: Geometry Construction/Books and Tools  
Description of Item & Its Components: Geo-ring polyhedra, straw polyhedra, paper and scissors polygons, mathematical models, patterns in space, wooden geometric solids, elementary set, secondary set, nesting polyhedra, d-stix  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: 5-12  
Annotation: This series of books and manipulatives is designed to reinforce the basic skills in geometry.
- Series Title: Heroes and Heroines of the Metric System  
Description of Item & Its Components: 1 filmstrip, 1 cassette, teacher's guide  
Producer: Guidance  
Copyright Date: 1975  
Interest Level: 4-9  
Annotation: This filmstrip presents an overview of the metric units for length, weight, volume, area, and temperature.

Nonprint Resources (continued):

- Series Title: History of Mathematics: Numbers at Work  
Individual Titles: Money: From Barter to Banking; Measurement: From Cubits to Centimeters; Time: From Moons to Microseconds; Numbers: From Notches to Numerals
- Description of Item & Its Components: 8 filmstrips, 8 cassettes, teacher's guide  
Producer: Guidance Associates  
Copyright Date: 1980  
Interest Level: 7-9  
Annotation: Each program explores the historical development of one of four mathematical applications--numeration, timekeeping, measurement, and money.
- Series Title: How Does It Work and What Does It Look Like  
Individual Titles: All Around with Circles; Angles and More Angles; Six Simple Machines
- Description of Item & Its Components: 3 filmstrips  
Producer: Educational Reading Services  
Copyright Date: 1981  
Interest Level: 1-4  
Annotation: This series gives very basic information on why angles are pointed and circles are round.
- Series Title: Introducing the Metric System  
Individual Titles: Length; Weight; Volume and Temperature
- Description of Item & Its Components: 3 filmstrips, 3 cassettes, teacher's guide  
Producer: National Geographic Educational Services  
Copyright Date: 1977  
Interest Level: 3-8  
Annotation: This series introduces and defines various metric units of measurement. "Length" deals with the meter, centimeter, millimeter and kilometer; "Weight" with the gram, kilogram, milligram; "Volume and Temperature" with the liter and milliliter, and the degree Celsius scale.
- Series Title: The Labors of Heckules
- Description of Item & Its Components: 1 filmstrip, 1 cassette, teacher's guide  
Producer: Guidance Associates  
Copyright Date: 1975  
Interest Level: 4-9  
Annotation: This filmstrip reinforces metric measurements related to length. The base-ten structure of the metric system is reviewed.

Nonprint Resources (continued):

Series Title: Laminated Teaching Clocks  
Description of Item  
& Its Components: 2 sets of plastic clock hands, clocks,  
instructions  
Producer: Developmental Learning Materials  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: These clocks are useful for teaching the time.

Series Title: Learning to Measure in a Metric World  
Individual Titles: Why Do We Measure?; How Tall, How Far and How  
Fast?; How Much Can It Hold?; How Much Does  
It Weigh?

Description of Item  
& Its Components: 4 filmstrips, 2 cassettes, metric ruler  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 1-4  
Annotation: This series of filmstrips provides concepts of  
measurement and the metric system.

Series Title: Let's Go Metric  
Individual Titles: History of the Metric System; The Meter; The  
Centimeter; The Millimeter; The Kilogram;  
Meter, Centimeter, Millimeter

Description of Item  
& Its Components: 6 filmstrips, 3 cassettes  
Producer: Educational Reading Services  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: These filmstrips provide the history of the  
metric system and the basic concepts of the  
metric system.

Series Title: Living Metric  
Individual Titles: At Home; At Stores; At Work; At Play  
Description of Item  
& Its Components: 4 filmstrips, 2 cassettes, metric ruler  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 4-8  
Annotation: This series provides an introduction to  
metrication for everyday living.



Nonprint Resources (continued):

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Geometry  
Description of Item  
& Its Components: Geoboard Activity Sheets, Geoboard Geometry, Dot Paper Geometry, Geoboard Activity Cards--Primary Set, Geoboard Activity Cards--Intermediate Set, rubber bands, Geoboards, 11"x11" Pin Geoboard, Tangram Patterns, Tangramath, Tangram Stickers, Tangram Tracer, Trangrams, Tangram Math Lab Kit, The Georule in Action, Georule, Starter Set, Wheeler's Design Tiles, Designer Set, Wheeler's Design Tiles Posters  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: 3-12  
Annotation: These manipulatives provide opportunities for students to produce graphically many abstract mathematical ideas. They are good for teaching concepts of shape, sets, angles, measurements, and number patterns.

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Operations and Place Value--Base Ten Blocks  
Description of Item  
& Its Components: Base ten blocks, base ten small group set, base ten classroom set, base ten math lab set (includes cubes, rods, flats and blocks), base ten activities  
Producer: Creative Publications  
Copyright Date: 1980  
Interest Level: K-6  
Annotation: These manipulatives provide numeration experiences in base ten and measurement activities in length, area and volume. The activities cover free play, trading games, counting, operations, converting, grouping things, algebraic experiences, filled in squares, filled in rectangles, and solid figures.

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Operations and Place Value--Math Balance with Masses  
Description of Item  
& Its Components: Balance with masses, math balance activity cards, teacher's guide  
Producer: Creative Publications  
Copyright Date: 1980  
Interest Level: 1-8  
Annotation: This program allows the student to deal with abstract mathematical ideas by manipulating a physical model. It encourages exploration of the fundamental operations by solving simple algebraic equations and demonstrates the commutative and associative laws.

Nonprint Resources (continued):

- Series Title: Mass  
Description of Item & Its Components: Scales, kilogram personal scale, bucket and pan balance, balance scale with weight, gram mass set, metric plastic stacking masses, math balance masses, bar mass set, primer balance, 5 KG scale  
Producer: Creative Publications  
Copyright Date: 1980  
Interest Level: K-12  
Annotation: These instruments are useful when teaching mass.
- Series Title: Math Mystery Theatre  
Individual Title: The Curse of the Tomb of King Tut Tut Cubit  
Description of Item & Its Components: 1 filmstrip, cassette, spirit masters, teacher's guide  
Producer: Imperial International Learning Corporation  
Copyright Date: 1978  
Interest Level: 4-6  
Annotation: This filmstrip develops skills in geometry: perimeter, area, and volume.
- Series Title: Math with Calculators  
Individual Title: Calculating Geometric Problems  
Description of Item & Its Components: 1 filmstrip, 1 cassette, teacher's guide, skill boosters  
Producer: Society for Visual Education  
Copyright Date: 1978  
Interest Level: 6-8  
Annotation: This filmstrip shows how geometric problems can be done more easily and more quickly on the calculator. The skill boosters reinforce calculator skills.
- Series Title: Math with Calculators  
Individual Title: Calculating Number Problems  
Description of Item & Its Components: 1 filmstrip, 1 cassette, teacher's guide, skill boosters  
Producer: Society for Visual Education  
Copyright Date: 1978  
Interest Level: 6-8  
Annotation: The program shows what problems can be done more easily and more quickly on the calculator. It introduces the concepts of estimating before calculating and double-checking each calculation.

Nonprint Resources (continued):

- Series Title: Math with Calculators  
Individual Title: Calculating Percentages  
Description of Item & Its Components: 1 filmstrip, 1 cassette, teacher's guide, skill boosters  
Producer: Society for Visual Education  
Copyright Date: 1978  
Interest Level: 6-8  
Annotation: This filmstrip shows how calculating percentages can be done more easily and more quickly on the calculator. The skill boosters reinforce calculator skills.
- Series Title: Mathematics: An Activity Approach  
Description of Item & Its Components: Manipulatives, spirit masters, activities and games, activity cards, geoboard and pegs, teacher's guide  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 6-9  
Annotation: This program uses a game approach to help students grasp the basic concepts and skills in numbers, computation, geometry, measurement, probability, and statistics.
- Series Title: Maxwell Mouse's Adventure in the Land of Metrication  
Individual Titles: Linear--Less Than A Meter; More Linear--The Meter and More; Liquid and Volume; Mass and Temperature  
Description of Item & Its Components: 4 filmstrips, 4 cassettes/records, teacher's guide, student worksheets  
Producer: Creative Learning  
Copyright Date: 1975  
Interest Level: 3-5  
Annotation: This cartoon series deals with metric measurement. It explores linear measurement, the meter and its submultiple units, the linear metric measurements dekameter, hectometer, kilometer, volume and liquid capacity, and mass and temperature.
- Series Title: Measure It!  
Individual Titles: Measure? -What For?; The Long and Short of It; Is There Enough of It? Measuring Today and Tomorrow  
Description of Item & Its Components: 4 filmstrips, 2 cassettes  
Producer: Educational Reading Services  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: This program provides an awareness of the concepts, and the everyday need for measurement.

Nonprint Resources (continued):

- Series Title: Measure Matters  
Individual Titles: A Measurement Program, Level A  
A Measurement Program, Level B  
A Measurement Program, Level C
- Description of Item  
& Its Components: 3 kits containing activity cards, duplicating  
masters, teacher's guides  
Producer: Creative Publications  
Copyright Date: 1976  
Interest Level: 1-6  
Annotation: A comprehensive, developmentally sequenced  
measurement program for children that parallels  
their natural development. It allows time for  
free exploration so that children become  
accustomed to handling materials and using  
language of measurement. It directs activities  
at three levels: prekindergarten through first  
grade, second and third grades, and fourth  
through sixth grade.
- Series Title: Measurement Comparisons (Perceptual Development)  
Individual Titles: Big and Little; Heavy and Light; Some and None;  
Wide and Narrow
- Description of Item  
& Its Components: 4 filmstrips, 4 cassettes, teacher's guide  
Producer: January Productions  
Copyright Date: 1977  
Interest Level: K-2  
Annotation: This series of filmstrips deals with comparisons  
of opposite size and with comparisons of  
quantity.
- Individual Title: Measurement: From Cubits to Centimeters  
Description of Item  
& Its Components: 2 filmstrips, 2 cassette tapes, teacher's guide  
Producer: Guidance Associates  
Copyright Date: 1975  
Interest Level: 4-6  
Annotation: These filmstrips discuss early units and  
standards of measurement and illustrate the  
development of standardized systems, explain  
the metric system of measurement, explore  
attempts to introduce this practical system in  
the United States, and end with a discussion of  
how the eventual change to metric will affect our  
lives and ways of thinking.



Nonprint Resources (continued):

Series Title: Measurement Skills  
Description of Item  
& Its Components: Audio-tutorial kit of filmstrip, cassette, game card, pupil practice pad, teacher's guide, ruler  
Producer: Encyclopaedia Britannica Educational Corporation  
Copyright Date: 1972  
Interest Level: 1-3  
Annotation: This kit provides measurement skills for individual study.

Series Title: Measuring Capacity  
Individual Titles: Understanding Capacity; Units and Language of Liquid Capacity; Units and Language of Dry Capacity; Capacity and the Consumer

Description of Item  
& Its Components: 4 filmstrips, 4 cassettes  
Producer: Educational Reading Services  
Copyright Date: 1980  
Interest Level: 4-6  
Annotation: This program is an introduction to the basic concepts and practical uses of dry and liquid measurement.

Series Title: Measuring the Metric Way  
Individual Titles: The Metric System of Measuring--SI; We Measure Distance; We Measure Mass and Weight; We Measure Volume and Density; We Measure Time

Description of Item  
& Its Components: 5 filmstrips  
Producer: Encyclopaedia Britannica Educational Corporation  
Copyright Date: 1974  
Interest Level: 4-8  
Annotation: These filmstrips use visual examples to demonstrate that measuring is a means of comparing and that the metric system offers the most practical way to compare.

Series Title: Measuring Weight--Metric  
Individual Titles: Understanding Weight; Units and Language of Weight; Scales; Weight and the Consumer

Description of Item  
& Its Components: 4 filmstrips, 4 cassettes  
Producer: Educational Reading Services  
Copyright Date: 1980  
Interest Level: 1-4  
Annotation: This series introduces the concepts of weight measurements using the metric system to measure standard units of weight.

Nonprint Resources (continued):

Series Title: Measuring with Metrics  
 Individual Titles: Length; Capacity; Weight; Temperature  
 Description of Item & Its Components: 4 filmstrips, 4 cassettes/records, teacher's guide  
 Producer: McGraw Hill Film  
 Copyright Date: 1976  
 Interest Level: K-3  
 Annotation: A series of filmstrips with cassettes that focus on the basic concepts of measurement. Four general categories are included: length, capacity, weight, and temperature. Concepts such as more/less, bigger/smaller, taller/shorter, etc., are applied.

Individual Title: Metric Box  
 Description of Item & Its Components: Kit--7 thermometers, 12 meter sticks, 1 clock, 3 pitchers, 1 container of cubes, 3 tape measures, 8 metric corners, 1 chart, 104 activity cards, 1 walking wheel, 3 teacher's guides  
 Producer: Addison-Wesley Publishers  
 Copyright Date: 1979  
 Interest Level: 1-9  
 Annotation: This kit contains all the materials required for teaching measurement in metric units. Kit A is designed for use in grades 1-4; Kit B is for use with grades 4-9.

Individual Title: Metric Box  
 Description of Item & Its Components: Kit containing activity cards and a teacher's guide  
 Producer: Educational Insights  
 Copyright Date: 1974  
 Interest Level: 4-6  
 Annotation: One hundred student cards are for individualized or small group use. Logical progression is made from non-standard measurement to metric length, volume, and mass. Includes separate teacher's guides.

Series Title: Metric Marvels  
 Individual Titles: Meet Meter Man; Mara-Mara-Marathon; I'm Your Liter Leader; Eeeny, Meeney, Miney Milliliter; Super Celsius; Wonder Gram; Wonder Baby  
 Description of Item & Its Components: 7 filmstrips, 7 cassettes, teacher's guides  
 Producer: Guidance Associates  
 Copyright Date: 1979  
 Interest Level: 3-6  
 Annotation: These filmstrips feature short songs to teach the metric system.

Nonprint Resources (continued):

Series Title: Metric Math  
Individual Titles: Using Centimeters; Other Metric Units of Length; Relationships Between Linear Units; Using Square Centimeters; More Experience with Area; Using Cubic Centimeters; More Experience with Volume; Capacity Weighing with Metric Systems; Temperature on the Celsius Scale; Using Decimals with the Metric System; The International System of Units

Description of Item & Its Components: 12 filmstrips, teacher's manual  
Producer: Educational Projections Corporation  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: This program explains the metric system through estimating measurements, weights, and volume of common objects and can be integrated into any math lesson dealing with problems in these areas.

Series Title: Metric Measurement  
Individual Titles: Length; Mass; Volume  
Description of Item & Its Components: Each set consists of 2 filmstrips, 1 cassette, 1 teacher's guide, and 20 activity cards  
Producer: Milton Bradley Company  
Copyright Date: 1974  
Interest Level: 5-9  
Annotation: The purpose of this program is to teach the metric concepts of length, mass, and volume. The activity cards provide students the opportunity to work on practice exercises following the viewing of each filmstrip.

Series Title: Metric Measurement  
Individual Titles: Metric Methods; Linear Language; Liquid Literacy; Weight Wisdom; Celsius Concepts  
Description of Item & Its Components: 5 filmstrips, 5 cassettes  
Producer: RMI Media Productions  
Copyright Date: 1975  
Interest Level: 4-6  
Annotation: This series of filmstrips shows that measurement is a part of our lives and that the metric system is becoming a part of it also. It focuses on measuring length in meters, centimeters, millimeters and kilometers, liter and milliliter, and kilograms.

Nonprint Resources (continued):

Series Title: Metric Measurement Multimedia Units  
 Individual Titles: Metric Measurement--Length; Metric Measurement--  
Mass; Metric Measurement--Liquid Capacity  
 Description of Item  
 & Its Components: 6 filmstrips, 3 cassette tapes, activity cards,  
 teacher's guide  
 Producer: Milton Bradley  
 Copyright Date: 1980  
 Interest Level: 5-8  
 Annotation: Each unit is designed to provide practice with  
 metric measurement, the interrelationships  
 between metric measurement, and the conversion of  
 the metric system.

Series Title: Metric Meets the Inchworm  
 Description of Item  
 & Its Components: 1 filmstrip, 1 cassette, 1 study guide  
 Producer: Barr Films  
 Copyright Date: 1975  
 Interest Level: 4-12  
 Annotation: This filmstrip shows the advantages of converting  
 to the metric system. It dwells on the attitudes  
 and fears of people who must exchange their  
 habitual ways of thinking and acting for newer,  
 more current trends.

Series Title: Metric Multimedia Kit  
 Individual Titles: Metric Units of Length; Metric Units of Weight;  
Metric Units of Volume  
 Description of Item  
 & Its Components: 3 filmstrips, 3 cassettes, 1 teacher's guide,  
 metric posters, 1 set of metric activity cards  
 Producer: Orange Cherry Media  
 Copyright Date: 1980  
 Interest Level: 3-8  
 Annotation: This three-part kit provides students with an  
 overall view of the fundamental units of the  
 metric system. The kit also includes metric  
 posters and one set of metric activity cards.

Series Title: The Metric Skill Box  
 Individual Titles: Think Metric; Introducing the Metric System;  
Working with Metric Length; Working with Metric  
Area; Working with Metric Volume; Working with  
Metric Liquid Capacity; Working with Metric  
Weight  
 Description of Item  
 & Its Components: 6 filmstrips, spirit masters, teacher's guide  
 Producer: Troll  
 Copyright Date: 1980  
 Interest Level: 4-8  
 Annotation: This program introduces the student to metric  
 weights and measures--meters, grams, liters--and  
 other metric units.



Nonprint Resources (continued):

- Series Title: The Metric System  
Description of Item & Its Components: Activity book, 1 cassette  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 4-6  
Annotation: This program provides activities to reinforce basic ideas and concepts used in the metric system.
- Series Title: The Metric System  
Individual Titles: Measuring; The Basic System; A New World; The Metric Kitchen; A Metric Day; The Metric Universe  
Description of Item & Its Components: 6 filmstrips, three 12" disc recordings-- 33 1/3 rpm  
Producer: Universal Education  
Copyright Date: 1974  
Interest Level: 9-12  
Annotation: This series reviews the history of the metric system, outlines a basic version of the system, and shows several of its uses in the physics laboratory and the kitchen.
- Series Title: The Metric System for the Intermediate Grades-- Set I  
Individual Titles: Units of Length Shorter Than a Meter; Units of Length Longer Than a Meter; Metric Units of Area; Metric Units of Volume  
Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's manual  
Producer: Pathescope Educational Media  
Copyright Date: 1973  
Interest Level: 4-6  
Annotation: This set explains the metric concepts through practical measurement problems. The abundant visual examples of meters, liters, and grams acquaint the viewers with the sizes of these unfamiliar metric units. The teacher's manual lists objectives, mathematical concepts, reinforcement and supplemental activities, and complete scripts and tests.

Nonprint Resources (continued):

- Series Title: The Metric System for the Intermediate Grades--  
Set II
- Individual Titles: Metric Units of Capacity; Metric Units of Mass  
or Weight; Relating Length, Capacity, Mass
- Description of Item  
& Its Components: 3 filmstrips, 3 cassettes, teacher's manual
- Producer: Pathescope Educational Media
- Copyright Date: 1973
- Interest Level: 4-6
- Annotation: This set explains the metric concepts through practical measurement problems. It involves measuring a child's mass for an airplane trip as well as the basic metric units of meters, liters, and grams.
- 
- Series Title: Metric System of Measurement
- Individual Titles: History of Measurement; Measuring Length;  
Measuring Weight; Measuring Volume
- Description of Item  
& Its Components: 4 filmstrips, 4 cassettes
- Producer: Educational Reading Services
- Copyright Date: 1980
- Interest Level: 1-4
- Annotation: This series provides the fundamentals of measuring length, weight, and volume, and then applying metric measurement.
- 
- Series Title: The Metric System I
- Individual Titles: SI--International System of Units; Base Unit--  
Length; Base Unit--Mass; Base Unit--Time;  
Base Unit--Temperature; Prefix Kilo; Prefixes  
Hecto and Deka; Prefix Deci; Prefix Centi;  
Prefix Milli
- Description of Item  
& Its Components: Study prints
- Producer: Encyclopaedia Britannica Educational Corporation
- Copyright Date: 1976
- Interest Level: 1-4
- Annotation: This series of study prints provides an introduction to the International System of Units.
- 
- Series Title: The Metric System II
- Individual Titles: Metre; Decimetre; Centimetre; Millimetre;  
Kilometre; Square Metre; Square Decimetre;  
Square Centimetre; Square Millimetre; Hectare
- Description of Item  
& Its Components: Study prints
- Producer: Encyclopaedia Britannica Educational Corporation
- Copyright Date: 1976
- Interest Level: 1-4
- Annotation: This series of prints provides basic skills in the quantities of length and area.

Nonprint Resources (continued):

Series Title: The Metric System III  
 Individual Titles: Litre; Millilitre; Kilolitre; Mass;  
Kilogram; Gram; Milligram; Metric Ton;  
Freezing and Boiling Points; Room Temperature  
 Description of Item  
 & Its Components: Study prints  
 Producer: Encyclopaedia Britannica Educational Corporation  
 Copyright Date: 1976  
 Interest Level: 1-4  
 Annotation: This series of prints provides an introduction to quantities--volume/capacity, mass, and temperature.

Series Title: Metric Survival Kit  
 Individual Titles: Length; Volume; Temperature; Area; Mass  
 Description of Item  
 & Its Components: Manipulatives, activities, teacher's guide  
 Producer: Enrich, Inc.  
 Copyright Date: 1975  
 Interest Level: 3-6  
 Annotation: This kit contains manipulatives and activities for teaching length, volume, temperature, area, and mass.

Series Title: Metri rods  
 Individual Title: Length  
 Description of Item  
 & Its Components: 1 meter rod, 10 decimeter rods, 15 centimeter rods, 18 activity cards  
 Producer: Great Ideas, Inc.  
 Copyright Date: 1974  
 Interest Level: K-3  
 Annotation: The activity cards develop relationships between metric units and provide basic measurement experiences for the student.

Series Title: The Metrikit  
 Individual Titles: See and Think Metric; Hear and Think Metric  
(Study Guide Cassette A); Hear and Think Metric  
(Study Guide Cassette B)  
 Description of Item  
 & Its Components: 10 student study guides, 2 audio cassettes, 1 filmstrip, 1 filmstrip cassette, 1 teacher's guide, 8 activity cards, 1 tape measure, 10 fifteen centimeter rulers, 1 250 ml measuring cup  
 Producer: Charles E. Merrill Publishing Company  
 Copyright Date: 1974  
 Interest Level: 3-6  
 Annotation: This program utilizes a multimedia format to provide a participating introduction to the metric system. Students listen to a sound tape presentation and follow along in their study guides while activity cards and measuring manipulatives are used to apply and review the concepts presented in a related series of steps.

Nonprint Resources (continued):

- Series Title: Metrics in the Home  
 Individual Titles: Cooking the Metric Way; Serving the Metric Way  
 Description of Item & Its Components: 2 filmstrips, 2 cassettes, teacher's guide  
 Producer: SVE  
 Copyright Date: 1980  
 Interest Level: 4-6  
 Annotation: This program introduces the student to the fundamentals of the metric system for cooking and serving.
- Series Title: Money/Consumer Education  
 Individual Title: Metric Market  
 Description of Item & Its Components: 61cm x 61cm (24" x 24") folding board, dice, 4 markers, 258 plastic chips, instructions  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 4-6  
 Annotation: This game gives the student practice in selecting metric unit, adding and multiplying metric measurements, and converting from one metric unit to another.
- Series Title: Polygons  
 Individual Titles: Polygons; Creative Constructions; Angles of a Polygon; Tessellations  
 Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide  
 Producer: Barr Films  
 Copyright Date: 1979  
 Interest Level: 4-6  
 Annotation: These filmstrips explore basic geometric concepts.
- Series Title: Real World Measurement  
 Individual Titles: Linear Measurement; Finding Area; Volume and Capacity; and Mass (Weight) and Temperature  
 Description of Item & Its Components: 4 filmstrips and audio cassettes, teacher's manual, 42 skill extenders  
 Producer: Society for Visual Education  
 Copyright Date: 1979  
 Interest Level: 9-12  
 Annotation: This series is designed to teach measurement. It explains the metric system of measurements and shows how to use the metric system.



Nonprint Resources (continued):

- Series Title: Schoolhouse: Mathematics 1, 2, and 3  
 Description of Item & Its Components: 400 skill cards, workbooks  
 Producer: Science Research Associates  
 Copyright Date: 1979  
 Interest Level: 1-3  
 Annotation: This program provides practice in numeration, operation, geometry, and measurement.
- Series Title: Situational Math  
 Individual Titles: Using the Metric System: Meter; Gram; Liter  
 Description of Item & Its Components: 6 filmstrips, 6 cassettes, teacher's guide, student activities, chart  
 Producer: United Learning  
 Copyright Date: 1974  
 Interest Level: 4-6  
 Annotation: Each filmstrip's math problems deal with one aspect of metric measurement. The skills taught in the filmstrip can be further developed and reinforced by using the five student activity sheets which accompany each filmstrip.
- Series Title: Telling Time  
 Description of Item & Its Components: Audio-tutorial kit of filmstrips, cassette tapes, visual materials, and questions  
 Producer: Encyclopaedia Britannica Educational Corporation  
 Copyright Date: 1971  
 Interest Level: 1-3  
 Annotation: This program teaches the skills necessary for telling time.
- Series Title: Telling Time Is Easy  
 Individual Titles: The Little Hand; The Big Hand; Hours and Minutes Together; Good Timing; Practicing Telling Time I; Practicing Telling Time II  
 Description of Item & Its Components: 6 filmstrips, 2 cassettes  
 Producer: Eye Gate Media  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: These filmstrips breakdown time-telling into basic components for the very young.
- Series Title: Think Metric  
 Description of Item & Its Components: 20 transparencies  
 Producer: Eye Gate Media  
 Copyright Date: 1979  
 Interest Level: 4-8  
 Annotation: This series of transparencies focuses on metric units of weights and measure.

Nonprint Resources (continued):

Series Title: Thinking Metric  
Individual Titles: Why Metric; Length, Width, Height and Speed; Volume and Capacity; Mass and Weight  
Description of Item & Its Components: 4 filmstrips, 2 cassettes, metric ruler  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 4-8  
Annotation: This series of sound filmstrips is designed to teach students to think in the metric system by relating metric measures to familiar objects.

Series Title: Time and Money  
Description of Item & Its Components: U.S. coins poster, sixty-minute timer, sand timers, stopwatch, money sense, coin rubber stamps, play money--bills, coins  
Producer: Creative Productions  
Copyright Date: 1980  
Interest Level: 1-6  
Annotation: These items are useful when teaching or reinforcing money and time concepts.

Series Title: Time and Temperature  
Description of Item & Its Components: Weather board, primary weather board, demonstration thermometer, 12 Celsius thermometer, 12 student thermometer, time teller, pupil's clock dials, two-faced clock dial, clock rubber stamps, calendar math, clock  
Producer: Creative Productions  
Copyright Date: 1980  
Interest Level: K-12  
Annotation: These instruments are very useful for teaching time and temperature to individuals or groups.

Series Title: Track 10 Primary Metric Measurements  
Description of Item & Its Components: 8 color charts, a 10-meter rope, spirit masters, song sheet, teacher's guide  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 1-4  
Annotation: This kit is designed to teach students comparison, the use of measurement devices, arbitrary units, and standard units and measurement scales.

Nonprint Resources (continued):

Series Title: Understanding the Metric System  
Individual Titles: Introducing the Metric System; Linear Measure-  
ment; Measuring Weight and Volume  
Description of Item  
& Its Components: 3 captioned filmstrips, 3 cassettes, teacher's  
guide  
Producer: Educational Filmstrips  
Copyright Date: 1974  
Interest Level: 4-6  
Annotation: This set of three filmstrips presents the metric  
system currently being used in the United States.

Series Title: Understanding the Metric System  
Individual Titles: What Is Measurement?; Measuring Distance;  
Measuring Weight and Mass; Measuring Volume  
Description of Item  
& Its Components: 4 filmstrips, 4 cassettes  
Producer: Clearvue  
Copyright Date: 1980  
Interest Level: 4-6  
Annotation: This introduction to the metric system teaches  
fundamental concepts of measurement through the  
ages. A young boy and girl take viewers from the  
times when measurement meant "the first knuckle  
of a man's hand," through the sophisticated  
techniques of Gabriel Fahrenheit, to our present  
precise systems. This historical overview serves  
as background to the concepts of weight,  
distance, and volume.

Series Title: Understanding the Metric System  
Individual Titles: Why Metric?; Prefixes, Abbreviations and Base  
Units; Volume or Capacity; Mass or Weight;  
Linear and Cubic Measures; Temperature and  
Electricity  
Description of Item  
& Its Components: 6 filmstrips, 6 cassettes, 6 practice sheets,  
6 teacher's guides  
Producer: Guidance Associates  
Copyright Date: 1979  
Interest Level: 4-7  
Annotation: This series is designed to present a factual  
overview of the metric system. Each filmstrip  
examines ways in which the logic of that system  
has been applied to particular kinds of  
measurement, and then examines the simple  
principles that determine the names of the  
various metric units.

Nonprint Resources (continued):

Series Title: Using the Metric System  
Individual Titles: Measuring Length; Measuring Capacity; Measuring Mass; Measuring Temperature; Calories; Metric Tools  
Description of Item & Its Components: 6 filmstrips, three 12" disc recordings, cassettes, teacher's guides  
Producer: Universal Education  
Copyright Date: 1974  
Interest Level: 6-12  
Annotation: This series presents the basic ideas of the metric system--length, capacity, mass, and temperature.

Series Title: We Use Mathematics  
Individual Titles: Time; Money; Measurement; English System of Measurement; Liquid Measurement; Geometric Shapes; The Metric System; Time in Minutes  
Description of Item & Its Components: 8 filmstrips  
Producer: Universal Education  
Copyright Date: 1980  
Interest Level: 3-8  
Annotation: The eight filmstrips introduce aspects of modern mathematics through a visual approach.



## MATHEMATICS (Using Data)

### The Student Will:

Use information from tables 2.3.1

Use information from graph 2.3.2

Find the average of a set of numbers 5.1.1

### GOAL:

To perform mathematical manipulations

### COMPETENCY:

Collecting and/or reading data

### PRINT RESOURCES:

- |                 |                                                                                                                                                                                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Author:         | James, Elizabeth                                                                                                                                                                |
| Title:          | <u>What Do You Mean by "Average?" Means, Medians, and Modes</u>                                                                                                                 |
| Copyright Date: | 1978                                                                                                                                                                            |
| Publisher:      | Lothrop                                                                                                                                                                         |
| Interest Level: | 4-6                                                                                                                                                                             |
| Annotation:     | This book explains mean, median, mode, and percentages.                                                                                                                         |
|                 |                                                                                                                                                                                 |
| Author:         | Lowenstein, Dino                                                                                                                                                                |
| Title:          | <u>Graphs</u>                                                                                                                                                                   |
| Copyright Date: | 1976                                                                                                                                                                            |
| Publisher:      | Watts                                                                                                                                                                           |
| Interest Level: | 5-7                                                                                                                                                                             |
| Annotation:     | This book explains various types of graphs in very practical terms and their use.                                                                                               |
|                 |                                                                                                                                                                                 |
| Author:         | Lowenstein, Dino                                                                                                                                                                |
| Title:          | <u>Graphs, A First Book</u>                                                                                                                                                     |
| Copyright Date: | 1976                                                                                                                                                                            |
| Publisher:      | Watts                                                                                                                                                                           |
| Interest Level: | 6-9                                                                                                                                                                             |
| Annotation:     | This book explains the many different kinds of graphs and how they are constructed for given relevant data.                                                                     |
|                 |                                                                                                                                                                                 |
| Author:         | Rand, Ken                                                                                                                                                                       |
| Title:          | <u>Point Counterpoint</u>                                                                                                                                                       |
| Copyright Date: | 1979                                                                                                                                                                            |
| Publisher:      | Creative Publications                                                                                                                                                           |
| Interest Level: | 3-8                                                                                                                                                                             |
| Annotation:     | This book provides reproducible, self-checking activities to test basic skills in graphing. Most of the book deals with quadrant graphs; the remainder with all four quadrants. |

Print Resources (continued):

Author: Srivastana, Jane Jonas  
Title: Statistics  
Copyright Date: 1973  
Publisher: Crowell  
Interest Level: 1-5  
Annotation: This book explains what statistics are and how they are compiled, used, and misused.

NONPRINT RESOURCES:

Series Title: Graphs and Charts  
Individual Titles: Introduction to Graphs; Bar Graph--Comparison; Line Graphs--Trends; Circle Graphs--Relationships; Picture Graphs--Counting  
Description of Item & Its Components: 5 filmstrips  
Producer: Educational Projections Corporation  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: These filmstrips explain how to interpret various types of graphs.

Series Title: Graphs and Charts Skill Box  
Individual Titles: Introduction to Graphs and Charts; Charts; Line Graphs; Bar Graphs; Pictographs; Circle Graphs  
Description of Item & Its Components: 6 cassettes, spirit masters  
Producer: Troll  
Copyright Date: 1980  
Interest Level: 4-8  
Annotation: This program provides the student with additional practice in working with all kinds of graphs and charts.

Series Title: Introducing Graphs  
Individual Titles: Why Graphs?; Bar and Pictographs; Single Bar and Circle Graphs; Coordinate System  
Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide  
Producer: BFA  
Copyright Date: 1975  
Interest Level: 3-8  
Annotation: This series discusses bar, pictographs, single bar, circle graphs, and graphs on a coordinate system. The guide contains discussion questions to follow each filmstrip.

Nonprint Resources (Continued):

- Series Title: Mathematics in Action  
Individual Titles: Graphs; The Metric System; Latitude and Longitude; Statistics; Sets and Probability; Probability and Insurance; Percent; Discount and Commission; Stocks
- Description of Item & Its Components: 8 filmstrips  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 7-9  
Annotation: This program is designed to serve as an aid in the presentation of certain pre-algebra mathematical topics.
- Series Title: Shapes  
Description of Item & Its Components: 6 filmstrips, 6 cassettes, spirit masters, teacher's guide  
Producer: Xerox Education Publications  
Copyright Date: 1977  
Interest Level: K-3  
Annotation: This set of filmstrips is designed to help students to recognize two- and three-dimensional shapes. The program presents its concepts in logical sequence and reinforces them using familiar objects.
- Series Title: Tables and Graphs  
Individual Titles: At the Communication Center; At the Nature Center; At the Newspaper Office; At the Airport
- Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide  
Producer: Weekly Reader Multimedia  
Copyright Date: 1981  
Interest Level: 4-6  
Annotation: These filmstrips present the basic facts about tables and graphs. The series introduces the various kinds of graphs, such as: picture, horizontal and vertical, multicolumn tables, area, axis numbers, multibar, multiline, bar with a floating axis, graphs with a broken axis, silhouette, and band.

## MATHEMATICS (Problem Solving)

### The Student Will:

Solve money problems using addition and subtraction 5.1.2  
Solve money problems using multiplication and division 5.1.3  
Solve problems using percents 5.1.4  
Make change 5.1.5  
Choose a reasonable answer for a mathematics problem 4.1.1  
Use simple formulas 2.1.14

### GOAL:

To perform mathematical manipulations  
To solve specific mathematical problems  
To use mathematical reasoning and processes to meet personal and societal needs

### COMPETENCY:

Computing and solving open sentences  
Solving and checking  
Solving personal/societal problems

### PRINT RESOURCES:

|                 |                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------|
| Author:         | Armstrong, Louis                                                                                                 |
| Title:          | <u>How to Turn Lemons into Money</u>                                                                             |
| Copyright Date: | 1976                                                                                                             |
| Publisher:      | Harcourt                                                                                                         |
| Interest Level: | 3-6                                                                                                              |
| Annotation:     | This is a guide book to economics for the very young. It includes economic terms that the young will understand. |

|                 |                                                                                                     |
|-----------------|-----------------------------------------------------------------------------------------------------|
| Author:         | Horn, Yvonne Michie                                                                                 |
| Title:          | <u>Dozens of Ways to Make Money</u>                                                                 |
| Copyright Date: | 1977                                                                                                |
| Publisher:      | Harcourt                                                                                            |
| Interest Level: | 7-9                                                                                                 |
| Annotation:     | This book details three dozen practical projects for young people who want to become entrepreneurs. |

|                 |                                                                                       |
|-----------------|---------------------------------------------------------------------------------------|
| Author:         | Merrill, Jean                                                                         |
| Title:          | <u>The Toothpaste Millionaire</u>                                                     |
| Copyright Date: | 1974                                                                                  |
| Publisher:      | Houghton                                                                              |
| Interest Level: | 5-9                                                                                   |
| Annotation:     | This is the story of Rufus Mayflower who produced and marketed a low-cost toothpaste. |



Print Resources (continued):

- Author: Modell, Frank  
Title: One Zillion Valentines  
Copyright Date: 1981  
Publisher: Greenewillow  
Interest Level: 1-2  
Annotation: Marvin and Milton make a zillion valentines for distribution in the neighborhood but discover that they still have some left. They decide to sell the remainder and with the funds purchase a heart-shaped box of candy.
- Author: Riedel, Manfred G.  
Title: Adds and Chances of Kids  
Copyright Date: 1979  
Publisher: Prentice-Hall  
Interest Level: 5-9  
Annotation: This book explains possibility, probability, and odds through a series of short stories.
- Author: Walter, Marion  
Title: Make a Bigger Puddle, Make a Smaller Worm  
Copyright Date: 1971  
Publisher: Evans  
Interest Level: PreK-2  
Annotation: Through a series of questions and the use of the mirror problem-solving situations are presented.
- Author: Weiss, Malcolm E.  
Title: Solomon Grundy, Born on Oneday: A Finite Arithmetic  
Copyright Date: 1977  
Publisher: Crowell  
Interest Level: K-3  
Annotation: Solving the problem of Solomon Grundy is used to introduce an arithmetical system.

NONPRINT RESOURCES:

- Series Title: Analyzing and Solving Verbal Problems  
Individual Titles: Number Problems; Consecutive Integer Problems; Angle Problems; Supplementary and Complementary; Mixture Problems; Solution Problems; Work Problems; Motion Problems (Distance); Digit Problems; Investment Problems; Geometric Problems
- Description of Item & Its Components: Each unit has a set of ten transparencies.  
Producer: Universal Education  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: These transparencies are designed to teach the student to read, understand, and translate English words, phrases, and sentences into mathematical expressions, equations, and inequalities, and to then use this understanding to decide upon a proper strategy of attack.

Nonprint Resources (continued):

- Series Title: Arithmetic Drill and Practice  
 Individual Titles: Look Into the Facts: Try-A-Tile Cards;  
Tiles; Pathways; Puzzle Tables--Number  
Problems with Computational Skills
- Description of Item  
 & Its Components: Cards, tiles, activities, workbooks  
 Producer: Creative Publications  
 Copyright Date: 1981  
 Interest Level: 2-6  
 Annotation: Try-A-Tile Cards are designed for problem solving activities as well as math practice.
- Series Title: Conquering Word Problems in Mathematics  
 Individual Titles: How to Read a Word Problem; Find What Is Asked;  
Find What Is Given; Find the Unstated Facts;  
Determine the Operation; Show the Relationships;  
Write the Number Sentence; Estimate the Answer;  
Try to Picture It; Check Your Work
- Description of Item  
 & Its Components: 10 cassettes, duplicating masters, teacher's guide  
 Producer: Math House  
 Copyright Date: 1979  
 Interest Level: 6-8  
 Annotation: This program provides a wider variety of problem-solving skills and strategies in mathematics. It can be used by an individual, a small group, or an entire classroom.
- Series Title: Consumer Math  
 Individual Titles: How's Your Shopping Math?; How's Your Paycheck  
Math?; How's Your Budget Math?; How's Your  
Savings Math?; How's Your Checkbook Math?;  
How's Your "Easy" Credit Math?; How's Your  
Borrowing Math?; How's Your Tax Math?; How's  
Your Driving Math?; How's Your Insurance Math?;  
How's Your Housing Math?
- Description of Item  
 & Its Components: 12 cassettes, spirit masters, teacher's guide  
 Producer: Math House  
 Copyright Date: 1977  
 Interest Level: 8-10  
 Annotation: This program presents consumer problems encountered in everyday life. Students solve the problems by using basic math skills.

Nonprint Resources (continued):

Series Title: Exploring New Math  
 Individual Titles: Introduction to Sets; Members of Sets; Mathematical Relationships; Counting Numbers and Whole Numbers; Addition; Subtraction; More Sets; Number Line; Addition and Subtraction; Fractions; Place Value; Multiplication; Division  
 Description of Item & Its Components: 13 filmstrips  
 Producer: Troll  
 Copyright Date: 1980  
 Interest Level: K-4  
 Annotation: This program introduces the fundamentals of the new math. Basic skills in problem solving, working with numbers, and the function of sets are developed through repetition.

Series Title: Guinness World Records Math Learning Module  
 Individual Title: Problem Solving with Addition  
 Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide, math exercises, poster with activity cards, iron-ons, Guinness Book of World Records  
 Producer: Society for Visual Education  
 Copyright Date: 1979  
 Interest Level: 6-7  
 Annotation: These filmstrips are designed to help children solve problems in addition.

Series Title: Guinness World Records Math Learning Module  
 Individual Title: Problem Solving with Division  
 Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide, math exercises, poster with activity cards, iron-ons, Guinness Book of World Records  
 Producer: Society for Visual Education  
 Copyright Date: 1979  
 Interest Level: 6-7  
 Annotation: These filmstrips are designed to help children solve problems in division.

Series Title: Guinness World Records Math Learning Module  
 Individual Title: Problem Solving with Multiplication  
 Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide, math exercises, poster with activity cards, iron-ons, Guinness Book of World Records  
 Producer: Society for Visual Education  
 Copyright Date: 1979  
 Interest Level: 6-7  
 Annotation: These filmstrips are designed to help children solve problems in multiplication.



Nonprint Resources (continued):

- Series Title: Guinness World Records Math Learning Module  
Individual Title: Problem Solving With Subtraction  
Description of Item & Its Components: 4 filmstrips, 4 cassettes, teacher's guide, math exercises, poster with activity cards, iron-ons, Guinness Book of World Records  
Producer: Society for Visual Education  
Copyright Date: 1979  
Interest Level: 6-7  
Annotation: These filmstrips are designed to help children solve problems in subtraction.
- Series Title: How to Solve Story Problems  
Individual Titles: Finding Information; Using Addition; Using Subtraction; Using Division; The Right Operation; Missing Information; Using Two Operations  
Description of Item & Its Components: Laminated 5 x 8 cards, teacher's guide, answer keys  
Producer: Developmental Learning Materials  
Copyright Date: 1979  
Interest Level: 3-8  
Annotation: This program focuses on finding information, using the correct operation, and solving two-step problems. It provides relevant data using pictures, graphs, tables, and stories with extraneous information.
- Series Title: Introduction to Probability and Statistics-- Series I and II  
Individual Titles: Series I--Simple Probability and Statistics; Permutations and Combinations; The Binomial Distribution; The Normal Curve and the Binomial Distribution; Sampling and the Central Limit Theorem  
Series II--Confidence Intervals; The t-Test; Hypothesis Testing; Chi-Square; The F-Distribution and the Analysis of Variance  
Description of Item & Its Components: 10 slide/filmstrips, teacher's guide  
Producer: Harper and Row  
Copyright Date: 1980  
Interest Level: 9-12  
Annotation: These ten modules emphasize the basic applications of statistics to business, the sciences, and the social sciences.



Nonprint Resources (continued):

Series Title: Manipulatives for Basic Concepts  
Individual Title: Manipulatives for Geometry  
Description of Item  
& Its Components: Pattern blocks, pattern blocks posters, pattern blocks problems for primary people, pattern blocks coloring book, pattern blocks activities, books A and B, pattern blocks paper pads, pattern blocks, pattern blocks rubber stamps, pattern blocks tracer, pattern blocks, stickers, pattern blocks math lab kit, pattern blocks games  
Producer: Creative Publications  
Copyright Date: 1981  
Interest Level: K-9  
Annotation: These manipulatives are basic for copying, patterning, logical thinking, and problem solving for primary children. They are very useful for fractions, complicated patterns, problem solving, and for beginning the study of functions for junior high school students.

Series Title: Math Applications Kit  
Description of Item  
& Its Components: Almanac, student handbook, activity cards, reference cards  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 4-8  
Annotation: The purpose of this kit is to apply math in science, social studies, sports and games, everyday things, and occupations.

Series Title: Math Basics I Can Use  
Individual Titles: Buying the Class Gift: Helen Figures Who Owes How Much; Earning Money: Ramon Learns About Inflation, Taxes, and Unforeseen Expenses; Financing a Hobby; Marty Estimates the Cost of Multiplying Guppies; Understanding Profit and Loss: Madeline Learns to Estimate Business Expenses  
Description of Item  
& Its Components: 4 filmstrips, 2 cassettes, spirit masters, teacher's guide  
Producer: Eye Gate Media  
Copyright Date: 1979  
Interest Level: 7-9  
Annotation: This excellent set of filmstrips shows how basic math is a necessary tool in everyday life for teenagers. It engages its audience in problem solving and math computations.

Nonprint Resources (continued):

Series Title: Math Word Problems  
 Individual Titles: Techniques; One-Step Operations; Two-Step Operations; Problems in Logic  
 Description of Item & Its Components: 4 filmstrips, 4 cassettes, 30 skill extenders  
 Producer: Society for Visual Education  
 Copyright Date: 1979  
 Interest Level: 9-12  
 Annotation: The purpose of this series is to show students that all word problems share common features and can be approached systematically.

Series Title: Money/Consumer Education  
 Individual Title: Amusement Park Game  
 Description of Item & Its Components: 24" x 21" rigid gameboard, 2 dice, 6 markers, a supply of bills and coins, a cashier's tray, instructions  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: This game focuses on the value of U.S. coins and bills, as well as how to make change.

Series Title: Money/Consumer Education  
 Individual Title: Buy and Sell  
 Description of Item & Its Components: 1 large wooden dice, a plastic cash tray, realistic money, instructions, 102 cards  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: The concept of making change is explained and demonstrated in this game.

Series Title: Money/Consumer Education  
 Individual Title: Coin Puzzles  
 Description of Item & Its Components: 24 double-sided cards, instructions  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: This puzzle helps students to count money and understand the value of money.

Series Title: Money/Consumer Education  
 Individual Title: Money Dominoes  
 Description of Item & Its Components: 28 cards  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: This game covers the various denominations of money and it gives the student practice in identifying coins and bills for everyday life.

Nonprint Resources (continued):

Series Title: Money/Consumer Education  
 Individual Title: Money Wheel  
 Description of Item  
 & Its Components: Money wheel  
 Producer: Developmental Learning Materials  
 Copyright Date: 1980  
 Interest Level: 1-3  
 Annotation: This money wheel provides practice in matching picture, numeral, and word representations of money amounts from one cent to five dollars.

Individual Title: Problem Solving  
 Description of Item  
 & Its Components: 4 filmstrips, 2 cassettes, game boards, game cards, problem cards, crayons, teacher's guides  
 Producer: Society for Visual Education  
 Copyright Date: 1975  
 Interest Level: 4-6  
 Annotation: Box (hero of SVE math modules) demonstrates an effective approach to solving story problems found in nearly every textbook. Box shows each step involved in solving a problem. First he restates the problem--identifies what is known and what is needed to solve it. Then he makes a model using pictures, number sentences, or diagrams to solve the problem. Despite occasional frustrations, he tries alternate solutions until he finds one that works for each problem.

Series Title: Problem Solving Kit  
 Description of Item  
 & Its Components: Problem and application cards, record folders, spirit masters, teacher's guide  
 Producer: Science Research Associates  
 Copyright Date: 1979  
 Interest Level: 6-8  
 Annotation: This kit provides students with strategies for thinking through solutions to problems.

Series Title: Situational Math II  
 Individual Titles: Module One: Problem-Solving Situations Involving Whole Numbers and Fractions; Module Two: Problem-Solving Situations Involving Fractions, Decimals and Percentages  
 Description of Item  
 & Its Components: 5 filmstrips  
 Producer: Educational Reading Services  
 Copyright Date: 1980  
 Interest Level: 7-12  
 Annotation: This series provides problem-solving situations for students needing practice in computational skills.



Nonprint Resources (continued):

- Series Title: Solving Word Problems in Mathematics  
Individual Titles: Reviewing Set Concepts; Understanding a Word Problem Situation; Understanding Verbal Descriptions; Using Number Sentences; Selecting and Solving; Combining Steps to Solve Word Problems
- Description of Item & Its Components: 6 filmstrips, 3 cassettes/records  
Producer: Eye Gate Media  
Copyright Date: 1980  
Interest Level: 1-3  
Annotation: The purpose of this series is to teach the skills of reading and understanding math problems.
- Series Title: Strategies for Solving Word Problems in Algebra  
Individual Titles: Basic Operations and Formula Problems; Mixture and Proportion Problems
- Description of Item & Its Components: 4 filmstrips, 4 cassettes, 2 teacher's guides  
Producer: The Center for Humanities  
Copyright Date: 1980  
Interest Level: 6-8  
Annotation: This series of filmstrips provides basic strategies for solving word problems. They focus on age problems, weight and coin problems, distance, rate, time problems and electricity, leverage and temperature problems.
- Series Title: Survival Math  
Description of Item & Its Components: 8 1/2"x 11" cards, worksheets, teacher's guide, student record sheets, answers to all exercises  
Producer: Sunburst  
Copyright Date: 1980  
Interest Level: 5-8  
Annotation: "Survival Math" introduces students to problem situations that require basic mathematic skills. It provides a valuable resource for individualized instruction, since the student can complete the activities without a great amount of direct supervision.
- Series Title: The Thinklab Series  
Description of Item & Its Components: Activity cards, manipulatives, teacher's guide  
Producer: Science Research Associates  
Copyright Date: 1979  
Interest Level: 2-4  
Annotation: This series of kits provides students with exercises in evaluating and viewing problems critically in order to compare and recombine facts.



Nonprint Resources (continued):

Series Title: Using Arithmetic When Shopping for Groceries  
Description of Item  
& Its Components: 1 filmstrip, 1 cassette, teacher's guide  
Producer: Interpretive Education  
Copyright Date: 1977  
Interest Level: 7-12  
Annotation: The filmstrip details consumer buying techniques. Many questions are proposed and answered from why bring along a shopping list to why take your pocket calculator.

Series Title: Versa-Tiles Real Life Math Lab  
Individual Titles: Making and Spending Money; Sports, Cars, and More; Measurement Around Us; Home Owner's Math and More; Unit Pricing and Taxes  
Description of Item  
& Its Components: 5 booklets  
Producer: Educational Teaching Aids  
Copyright Date: 1980  
Interest Level: 5-10  
Annotation: This program provides a good collection of realistic problems in a novel framework. It covers very practical exercises that will supplement a regular textbook.